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The Province of Alberta

IN THE MATTER OF "THE NATURAL
GAS UTILITIES ACT"

—and—

IN THE MATTER OF an Enquiry into
Scheme to be adopted for Gathering,
Processing and Transmission of
Natural Gas in Turner Valley

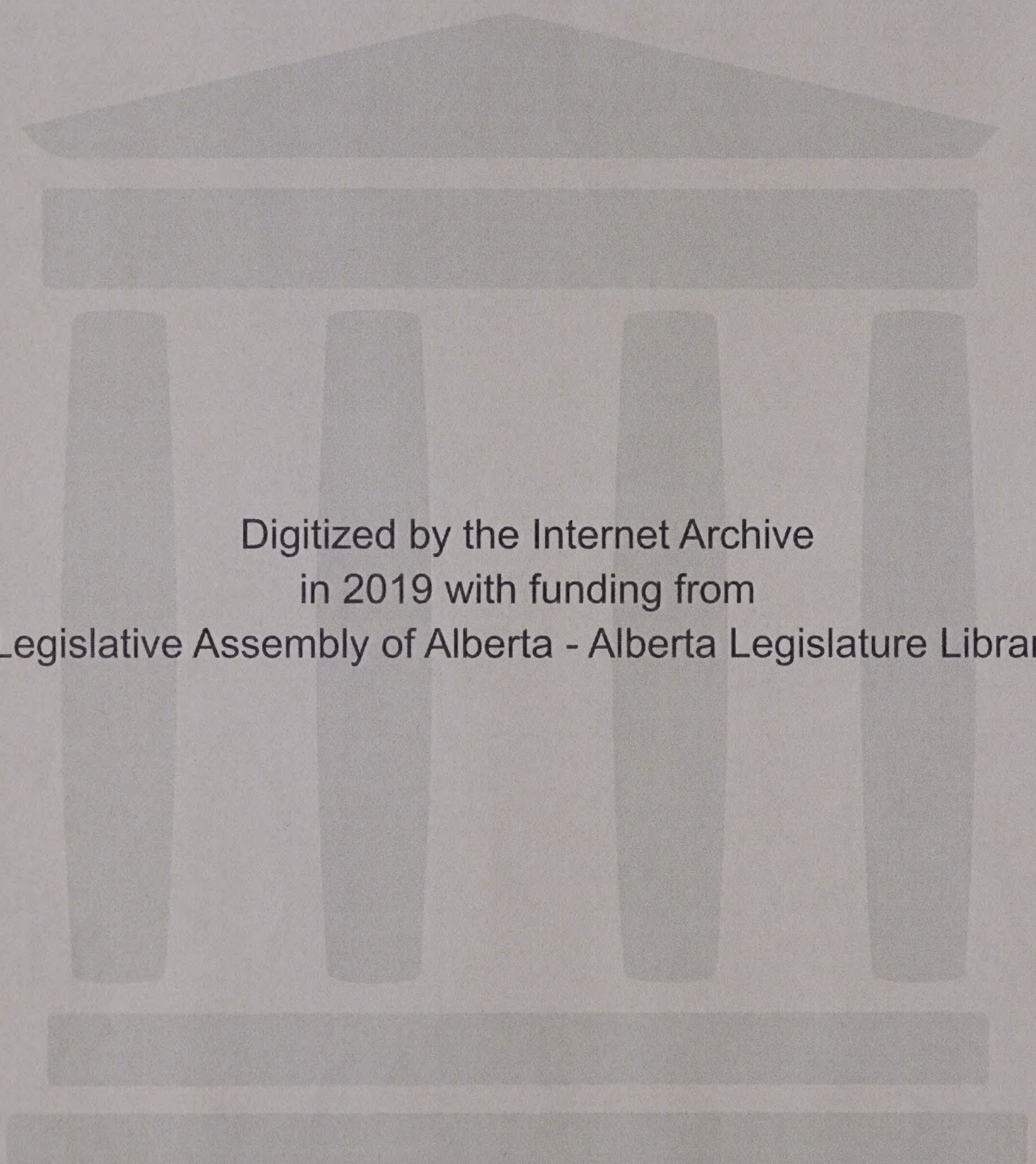
G. M. BLACKSTOCK, Esq., K.C., *Chairman*

Dr. E. H. BOOMER, F.C.I.C., *Commissioner*

Session:

CALGARY, Alberta June 12th, 1946

VOLUME 84



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I N D E X

VOLUME 84

Wednesday,
June 12th, 1946.

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Argument by Mr. Chambers.

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Wednesday,
June 12th, 1946.

PART IX - WELL HEAD PRICE.

MR. CHAMBERS: I propose now, sir, to turn my attention to a discussion of the matter of well head price.

THE CHAIRMAN: Have you any real light to shed on it ?

MR. CHAMBERS: I hope so. I am not saying it will be whole heartedly accepted by any means.

Section 72 (1) (a) of the Act, as amended in 1945, empowers the Board to fix and determine "the just and reasonable price or prices" to be paid for natural gas at the well head exclusive of

"any component part.....to be extracted therefrom and sold before delivery of the natural gas to a public utility..."

In other words, the statute authorizes the Board to fix the just and reasonable well head price of unscrubbed residue gas.

Now I suggest it should be borne in mind that the producer of natural gas is, by the legislation which I will mention in a moment, restricted or circumscribed in the production use and disposition of his natural gas property as follows:

The first Statute to which I refer is; The Oil and Gas Resources Conservation Act, ch. 66 R.S.A. (1942) and there is also the further The Oil and Gas Wells Act, ch. 67 R.S.A. (1942) and the regulations under those two Statutes, he is required to operate and produce his well so as to preserve and conserve the reservoir in accordance with sound principles of petroleum engineering.

Those two Statutes deal with the engineering

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phase of production and are obviously designed to ensure the maximum long term recovery of petroleum and petroleum products including the gas.

THE CHAIRMAN: And conservation of the gas in place ?

MR. CHAMBERS: Yes, and also conserves the petroleum itself.

Those statutes are not concerned with gas after it has been produced and used in a provident or non-wasteful manner for the production of the reservoir fluid.

On the other hand, the legislature has now, by The Natural Gas Utilities Act, devoted to the public service and use the residue gas after it has been produced and has entrusted to this Board the general power and authority to control its use and sale in, and its preservation for, the dry gas markets whatever it may be.

And I submit also that was also the view of Dr. Katz and I refer in that regard to what he said at Volume 69, pages 5737-5739.

Now, sir, I suggest it is well to keep in mind that (in its application to Turner Valley) The Natural Gas Utilities Act does not, primarily at least, contemplate the control of the production, nor to allocate or guarantee to the producer the cost of production, of his natural gas.

I do suggest it is concerned with the sale and the wastage or improvident use of it, as a commodity (on the top of the ground) impressed with a public interest.

This Board is by that statute charged with the responsibility of seeing that that commodity is providently preserved for the public dry gas market at just and reasonable prices, and to that end, the legislature (in the general public interest) has entrusted to this Board the following powers and duties that I find in the Act:

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Argument by Mr. Chambers.

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First of all to control as public utilities all plant, systems and apparatus and facilities for the gathering of that gas for scrubbing it and for the orderly marketing and storage of it. Secondly, to direct to what market it will go and what use shall be made of it. Thirdly, to fix just and reasonable prices for which, and to whom, it shall be sold and when. And fourthly, to prevent the owner of the gas from dealing with or using it, in his uncontrolled discretion, as he should see fit.

I therefore, submit and contend that, in carrying out those duties, this Board is not concerned with, and should consider as wholly irrelevant:

First of all whether or not unscrubbed residue gas may or may not be a by-product either at the well head or anywhere else,

Secondly, the fact that such gas may have already served a useful purpose in lifting petroleum to the surface of the earth,

Thirdly whether or not natural gas was or was not needlessly flared, wasted or dissipated in the past.

And I submit this Board has no power to deal, and is not concerned, with gas that has been flared or wasted in past years, prior to the passing of this Act.

And I respectfully submit that this Board is not authorized to study or pass upon the production practices of the past.

Nor is it, in my submission, empowered by the Statute to deal with present day production practices. Those are matters entrusted to other Boards, and they are matters within the competence of the Legislature and of the Lieutenant

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Governor in Council and the Conservation Board to whom the legislature has specifically delegated powers by The Conservation Act and by The Oil and Gas Wells Act.

Now even if and I submit it does not, the Natural Gas Utilities Act did confer any power of such regulation on this Board such powers cannot, I submit, be construed as retroactive, either directly or indirectly, and I therefore, sir, contend that the recommendation of Ralph E. Davis (in his Exhibit 148) that this Board, in fixing the well head price should take into account; first of all that the depleted condition of the Turner Valley field is due to the practice of flaring gas in past years;^{secondly} he suggested that the gas is gathered from many wells and is sour gas and that had something to do with and should be penalized from different approaches on that account alone.

Now even if the Board were permitted to determine the present day and future well head price on the basis of history and of the past it should in any case (I submit) take into consideration, and be influenced, by the following cogent facts which I suggest are important:-

First of all the Gas Company, and the consumers, have since 1921 been relieved and in recent years more fully relieved of the burden and expense of providing for themselves, and paying for, future gas reserves.

Secondly, such gas reserves have been provided without expense by the Oil industry.

And also another, the Turner Valley oil industry was primarily responsible for the Imperial Refinery contract in 1926 which financed the initial construction of the Turner Valley - Calgary pipe line.

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Argument by Mr. Chambers.

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The Turner Valley oil industry ensured a specific revenue to the Gas Company for transportation of refinery gas.

And also that the oil industry assisted in Bow Island repressuring.

It was the oil industry brought the Nitrogen Plant to Calgary and to the Gas Company's system.

The oil industry spent moneys on, and designed, its gas gathering lines and compressor equipment to take care of, and assure, a continuous and uninterrupted gas supply to the Calgary market.

Since the Gas Company contracted with the Turner Valley Oil industry for its assured and increasing supply its retail rates have, thereby, and I am not saying entirely, but substantially thereby, been consistently and progressively reduced from 48¢ per m.c.f. in 1921 to 25¢, and in other instances, industrial, 15 to 10¢. That is shown by Exhibit 134, the history of the retail rates.

I would also point out that the oil industry has and I am referring particularly to the Royalite plant, designed and operated its absorption plant to coincide with and accommodate the Gas Company's market.

Also the wholesale gas rate to the Gas Company was substantially reduced and has not since been increased in keeping with rising prices and costs, wages, taxes, etc. That contract originated, as the Exhibit shows, at nine or nine and a half cents, now it is seven and three-quarters.

MR. HARVIE: Thirteen cents was it not in the Exhibit ?

MR. CHAMBERS: That is right.

The Gas Company's retail rates are as low as, and for the most part lower than, other rates on the

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Argument by Mr. Chambers.

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American continent and this in spite of a poor and expensive load factor.

The basic fact is, sir, that the Natural Gas Utilities Act prevents a well owner from doing as he pleases with his property. He cannot speculate with it. He must sell at prices fixed by the Board.

But, in return, or as compensation, for those restrictions, the legislature (in accordance with the well known and long established principles of British justice and fair play) has told and directed this Board to assure the well owner just compensation by means of, "a just and reasonable well head price."

And to repeat, my contention is, that those words "just" and "reasonable" preclude the Board from fixing the well head price or prices:

- (i) on the basis of Turner Valley history,
- (ii) or by any arbitrary method,
- (iii) or as a mere matter of judgment,
- (iv) on what the particular situation of any or all of the producers would have been if the Natural Gas Utilities Act had not been enacted.

By the use of the words "just" and "reasonable" the legislature (not the producers - not Royalite) not any other party, and not the shareholder, has decreed and directed that the Board's judgment or determination of the well-head price must be based on, and influenced by:

SECRET

1. The purpose of this document is to provide information regarding the activities of the [redacted] organization.

2. The [redacted] organization is a [redacted] group that has been active in the [redacted] area for several years. It is believed to be involved in [redacted] activities.

3. The [redacted] organization has been identified as a [redacted] threat to the [redacted] security of the [redacted] country. It is believed to be involved in [redacted] activities.

4. The [redacted] organization has been identified as a [redacted] threat to the [redacted] security of the [redacted] country. It is believed to be involved in [redacted] activities.

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(a) justice, in accordance with natural justice, on basic legal principles and rights,

(b) reason, logic, not arbitrary.

In other words, - it is my submission that the Board should fix and determine "the just and reasonable well-head price or prices" in accordance with the following basic principles.

THE CHAIRMAN: There is one point you mentioned, Mr. Chambers, that I would like to discuss for a moment. You say, that a producer's gas is dedicated to public service and he must sell it to the utility at a price fixed by the Board. Supposing the producer found another use for his gas?

MR. CHAMBERS: Well, I would say this, Sir, that the statute being one of a general public interest, that the individual rights must be considered in the light of the general public good, and if the two clash, that the individual rights must be qualified. In other words, the statute has that effect. And if the Board does decide at some stage of the proceedings that there is a certain scheme to be worked out, and that certain equipment is to be installed in the general public good, now, I think under those circumstances that if one producer or two producers or three producers want to withdraw their gas from that scheme for some particular reason of their own, and their doing so would result in seriously interfering with the sound carrying out of that scheme, the Board has the power, in my submission, under Section 71, I think it is, to still say "You cannot do what you like with the gas".

THE CHAIRMAN: And if the Board decides that he should be allowed to do what he likes with the gas, couldn't

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1. The first part of the paper is devoted to a general

discussion of the problem.

2. The second part is devoted to a detailed

analysis of the various cases.

3. The third part is devoted to a discussion of the

results of the analysis.

4. The fourth part is devoted to a discussion of the

conclusions of the paper.

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you do that by underwriting the investment that had been made with relation to the reserves in his well?

MR. CHAMBERS: Probably I could answer that this way, that in my view he could only do so on terms which the Board would have to assess.

THE CHAIRMAN: That clears up what I wanted, Mr. Chambers.

MR. CHAMBERS: What I am coming to, Sir, is this, and this is my own submission for what it is worth, that the Board should fix and determine "the just and reasonable well head price or prices" according to the following basic principles:

- (i) the fair price of a raw product at its place of production should be the reasonable retail price to the consumer less the just and reasonable cost of processing handling and delivery to market.

THE CHAIRMAN: That means you are going back to elementary economic principles, that is, that your market price is the first thing to be fixed, and the rest follow that?

MR. CHAMBERS: The value of the output must be governed, in my submission, by the retailers.

- (ii) I say the maximum reasonable price to the consumer is the value of the service in terms of alternative service. That is the maximum.

Now, I would point out, Sir, that the evidence is that:

- (i) the present consumer rates are below those of

1. The first part of the paper is devoted to a general discussion of the problem.

2. In the second part, we shall consider the case of a single particle.

3. The third part is devoted to the case of a system of particles.

4. In the fourth part, we shall discuss the results of our calculations.

5. The fifth part is devoted to a comparison of our results with the results of other authors.

6. In the sixth part, we shall discuss the physical meaning of our results.

7. The seventh part is devoted to a summary of the results of our work.

8. In the eighth part, we shall discuss the conclusions of our work.

9. The ninth part is devoted to a discussion of the prospects of our work.

10. In the tenth part, we shall discuss the results of our calculations.

11. The eleventh part is devoted to a summary of the results of our work.

12. In the twelfth part, we shall discuss the conclusions of our work.

13. The thirteenth part is devoted to a discussion of the prospects of our work.

14. In the fourteenth part, we shall discuss the results of our calculations.

15. The fifteenth part is devoted to a summary of the results of our work.

16. In the sixteenth part, we shall discuss the conclusions of our work.

17. The seventeenth part is devoted to a discussion of the prospects of our work.

18. In the eighteenth part, we shall discuss the results of our calculations.

19. The nineteenth part is devoted to a summary of the results of our work.

20. In the twentieth part, we shall discuss the conclusions of our work.

21. The twenty-first part is devoted to a discussion of the prospects of our work.

22. In the twenty-second part, we shall discuss the results of our calculations.

23. The twenty-third part is devoted to a summary of the results of our work.

Argument by Mr. Chambers.

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most cities on the continent, even those with a better load factor and near sources of production,

(ii) the Calgary retail gas rates are not near the point where coal is in competition.

And I refer to the evidence of R. E. Davis:

Vol. 67 pages 5451-5453.
Vol. 67 pages 5457-5458,
Vol. 67 pages 5459-5461,
Vol. 67 pages 5460-5462.

And Mr. Stanley Davies:

Vol. 70 page 5812
Vol. 71 pages 5818-5820,

(iii) I suggest coal prices have increased over the years whereas gas prices to Calgary consumers have decreased.

S. J. Davies:

Vol. 70 page 5799,
Vol. 70 pages 5813-5815,
Vol. 71 pages 5820-5823.

(iv) that The Gas Company's retail load was built up to the saturation point during a period when coal prices were lower and gas prices higher than now.

I again refer to the prices in the transcript upon which I based my statement.

Brownie:

Vol. 64 pages 5125-5140.
Vol. 64 pages 5167-5171,
Vol. 66 pages 5283-5289,
Vol. 66 page 5296.

S. J. Davies:

Vol. 70 page 5799,
Vol. 70 pages 5814-5815,
Vol. 71 pages 5820-5823.

1944-1945

1. The first part of the report is devoted to a description of the work done during the year. It is divided into two main sections: (a) the work done in the laboratory and (b) the work done in the field.

(a) The work done in the laboratory is described in detail. It includes a description of the apparatus used, the methods employed, and the results obtained. The results are presented in the form of tables and graphs.

(b) The work done in the field is also described in detail. It includes a description of the area surveyed, the methods employed, and the results obtained. The results are presented in the form of tables and graphs.

2. The second part of the report is devoted to a discussion of the results obtained. It is divided into two main sections: (a) the discussion of the results obtained in the laboratory and (b) the discussion of the results obtained in the field.

(a) The discussion of the results obtained in the laboratory is presented in detail. It includes a discussion of the accuracy of the measurements, the reliability of the results, and the significance of the findings.

(b) The discussion of the results obtained in the field is also presented in detail. It includes a discussion of the accuracy of the measurements, the reliability of the results, and the significance of the findings.

3. The third part of the report is devoted to a summary of the work done during the year. It includes a summary of the work done in the laboratory and the work done in the field.

4. The fourth part of the report is devoted to a list of references. It includes a list of the books, articles, and other sources used in the preparation of the report.

5. The fifth part of the report is devoted to a list of acknowledgments. It includes a list of the people who have helped in the preparation of the report.

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Exhibit 134, which you will recall is the large blue-print giving the retail rates throughout the year, shows that throughout the years 1913 to 1939 Canadian Western's retail domestic and commercial rates ranged from 33¢ to 48¢ net per m.c.f. for those years.

Admittedly the price of coal throughout those years was less than it is today.

Vol. 70 page 5799.
Vol. 71 page 5841
Vol. 71 page 5851.

Exhibit 138 (Part 2) shows that from 1921 to 1939 the Gas Company's domestic sales increased from 2,186,777 m.c.f. to 3,794,785 m.c.f. and its commercial load from 227,788 m.c.f. in 1926 to 2,103,266 m.c.f. in 1939.

The average annual domestic rates, during that period, varied from a high of 46.11¢ in 1925 to a low of 33.02¢ in 1934.

The average annual per m.c.f. commercial rate varied from a high of 33.84¢ in 1926 to a low of 29.02¢ in 1932 and in 1939 it was 30.21¢.

That is shown in Exhibit 138, Part 2.

Now, R. E. Davis, who was called by the Gas Company, frankly and definitely stated that the present domestic retail prices of gas were far below the competitive coal level.

Vol. 67 pages 5457-5462.

Mr. Stanley J. Davies also gave, as his opinion, that the present Gas Company retail rates are cheaper than coal.

Vol. 70 page 5812.

and that the present domestic gas rates are below competitive coal levels.

Vol. 71 page 5845.

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And I also refer to the Board's discussion with Davies, at Volume 71, pages 5851-5854.

Now, Mr. Brownie, in his Exhibit 137, page 1, states that local gas rates are admittedly low in relation to rates in most communities in the U.S.A.

Mr. Brownie also admitted that even with coal mines adjacent to its city limits, the Edmonton Gas Company has built up its gas load in Edmonton since 1933 under higher rates, commencing with 45¢ per m.c.f., and during a period when coal was cheaper than it now is.

Vol. 64 pages 5131-5132.

I have for distribution some figures that I now propose to discuss based on the exhibits that are already in.

DOCUMENT CONTAINING FIGURES IN
QUESTION MARKED AS EXHIBIT 182.

Now, Canadian Western's 1945 financial statement, which is contained in Exhibit 169, shows:

Fixed assets	\$ 9,270,075.45
Depreciation and Amortization	<u>4,582,799.69</u>
Net fixed assets	\$4,687,275.76
Working Capital	<u>493,127.18</u>
Or a net Rate Base of	\$5,170,402.94
Net Operating Income after expenses and depreciation	1,073,432.26
Allowing 14-1/6%, which is a gross rate to allow 8 1/2% net after 40% income tax, the return on that rate would be	<u>732,473.65</u>
Excess Earnings, and I am using that for the purposes of my discussion and assumption, therefore I suggest are	<u>\$ 340,958.61</u>

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Now, I would here point out that in the absence of any evidence as to the specific assets included in Canadian Western's rate base, I am proceeding on the assumption that all of that Company's fixed assets and working capital, as shown by Exhibit 169, are properly included in its rate base.

MR. STEER: Net or gross?

MR. CHAMBERS: Net.

MR. STEER: Now, Mr. Chairman, I think I must say here that these figures that are submitted by my learned friend, both in this statement and in the previous statement he filed with respect to my client's affairs, are entirely misleading, and if this kind of argument is to be put forward, it could only be put forward properly on leading the proper evidence with respect to my client's affairs.

THE CHAIRMAN: Of course, there may be a reply to it, Mr. Steer. The balance sheets are in. I suppose Mr. Chambers is entitled to draw such deductions as he may see fit.

MR. STEER: I will have something to say on that, but what I want to say here is that both this document and the previous document filed of the same character, are entirely misleading.

THE CHAIRMAN: Well, Mr. Steer, I think I can perhaps relieve your mind to this extent, that my own auditor, and I think you will all concede he is quite an able one, will not pretend to draw any conclusion whatever that he can advance as being completely sound from the balance sheets.

MR. STEER: Yes.

THE CHAIRMAN: Now he told me why, and I think I know a little bit about it, but I think Mr. Chambers is

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entitled to draw his conclusions.

MR. STEER: Absolutely.

THE CHAIRMAN: And you have the right to reply.

MR. STEER: Quite so, sir.

THE CHAIRMAN: Don't let that discourage you, Mr. Chambers.

MR. CHAMBERS: No sir. All I would say is this, Sir, with respect to the statement that was put in yesterday, I am not saying that that is the way that the Calgary Gas Company is to arrive at that rate. I say that in my submission, and I am applying to their rate base the same principles I am applying to our own, and I want to see what the comparable results are.

T-1-1 10.30 A.M.

Argument by Mr. Chambers.

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Now in 1945 Canadian Western Gas Sales

Domestic 5,562,035 m.c.f.

Commercial 4,186,044 m.c.f.

Industrial (inclusive of
Imperial Oil for 11 mos.
Imperial Oil for Feb. to
Dec. 1,761,236 m.c.f.) 4,457,520 m.c.f.

Imperial Oil January for that
year 182,307, m.c.f.

Alberta Nitrogen 3,183,936 m.c.f.

In 1945 Canadian Western
sold to Domestic consumers 5,562,035 m.c.f.

Commercial consumers 4,186,044 m.c.f.

9,748,079 m.c.f.

I am assuming it - and this is pure assumption - but I am putting forward this as an effort to get some idea and I am not saying that it is the only one as to what the value of the gas is to the Gas Company. I am assuming that domestic and commercial rates had been increased by 5¢ from 25¢ to 30¢ per m.c.f. during 1945, and that is on the amount of consumption, that would have amounted to another \$487,403.95.

9,748,079 x 5¢ - \$487,403.95.

I submit, sir, that on the basis of the evidence as to the competitive price of coal it is not a violent assumption. I will assume in the second place that the Nitrogen Plant, in respect of its 1945 consumption of 3,183,936 m.c.f. had been charged and billed on the basis of Rate No. 6 shown on Exhibit 134; that is the rate the Imperial Oil Refinery is under and I believe several other large users and if that had been done, the Nitrogen Plant

Argument by Mr. Chambers.

- 6786 -

would have paid an additional sum of \$150,600.17 as follows:

1945 monthly average consumption	265,328 m.c.f.
Fixed Charge (Rate 6 Ex. 134)	20.00
Demand Charge (265,328 \div 60)	4,422.00
First 2000 m.c.f. at 15¢	300.00
Second 2000 m.c.f. at 12¢	240.00
261,328 m.c.f. at 10¢	26,132.80
	<u>31,114.80</u>

<u>\$31,114.80</u>	
265,328 m.c.f. average per m.c.f.	11.73¢

And if the total for the year had been paid for at that rate, it would have or the Gas Company would have a revenue of 3,183,936 x 11.73, the total charge for 1945 \$373,475.69

3,183,936 at 7¢ actually paid for 1945	
was	<u>222,875.52</u>
Or an increase of	\$150,600.17

On the basis of the foregoing, Canadian Western could have paid Madison in 1945 for gas wholesale the sum of \$1,993,835.77 as follows:

1945 excess over 8½% on the net rate base	\$340,958.61
1945 5¢ increase (domestic & commercial)	487,403.95
1945 increase re Nitrogen Plant	150,600.17
1945 actual gas purchases by Canadian Western (Ex. 169) were	<u>1,014,873.04</u>
Or a grand total of	\$1,993,835.77

Or an average per m.c.f. worked out as follows:

<u>\$1,993,835.77</u>	\div 16,148,235	= 12.347 cents per m.c.f.
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That is true basing the return to the Gas Company at 8½% on the net rate base.

Argument by Mr. Chambers.

- 6787 -

On the basis of the foregoing Madison's over-all 1945 income for scrubbed gas sales (exclusive of Bow Island storage) would have been \$2,038,424.39 made up as follows:

Canadian Western 16,148,235 x 12.347¢	\$1,993,822.58
Valley Gas Co. 281,801 x 12.347¢	34,793.97
Royalite Domestic 44,281 x 12.347¢	5,467.38
Valley Pipe Line Co. 35,154 x 12.347¢	4,340.46
	<u>\$2,038,424.39</u>

Madison's 1945 net requirement from market as shown on Part 7 of my Argument	<u>913,613.97</u>
--	-------------------

Balance available for gas supplied to Madison 1945	\$1,124,810.42
--	----------------

Madison's total 1945 costs (after crediting gathering charges paid by Royalite's absorption plant) for handling gas directly connected to its system were \$913,613.97 as follows:

Gathering costs (Arg. Statement VII - Sch. 4-45)	213,971.03
Scrubbing costs (Arg. Statement VII - Sch. 4-45)	351,867.46
Compressing costs (Arg. Statement VII - Sch. 4-45)	241,117.56
Repressure system costs (Arg. Statement VII Sch. 4-45)	38,732.26
South residue lines (Arg. Statement VII - Sch. 4-45)	67,925.66
	<u>\$913,613.97</u>

Now the next is on the basis of 12.347 cents. I do not think there is any particular point in me going over these figures. They are broken down and taken from Part VII to show the cost to Madison in respect of each m.c.f. of gas from the different systems.

Argument by Mr. Chambers.

- 6788 -

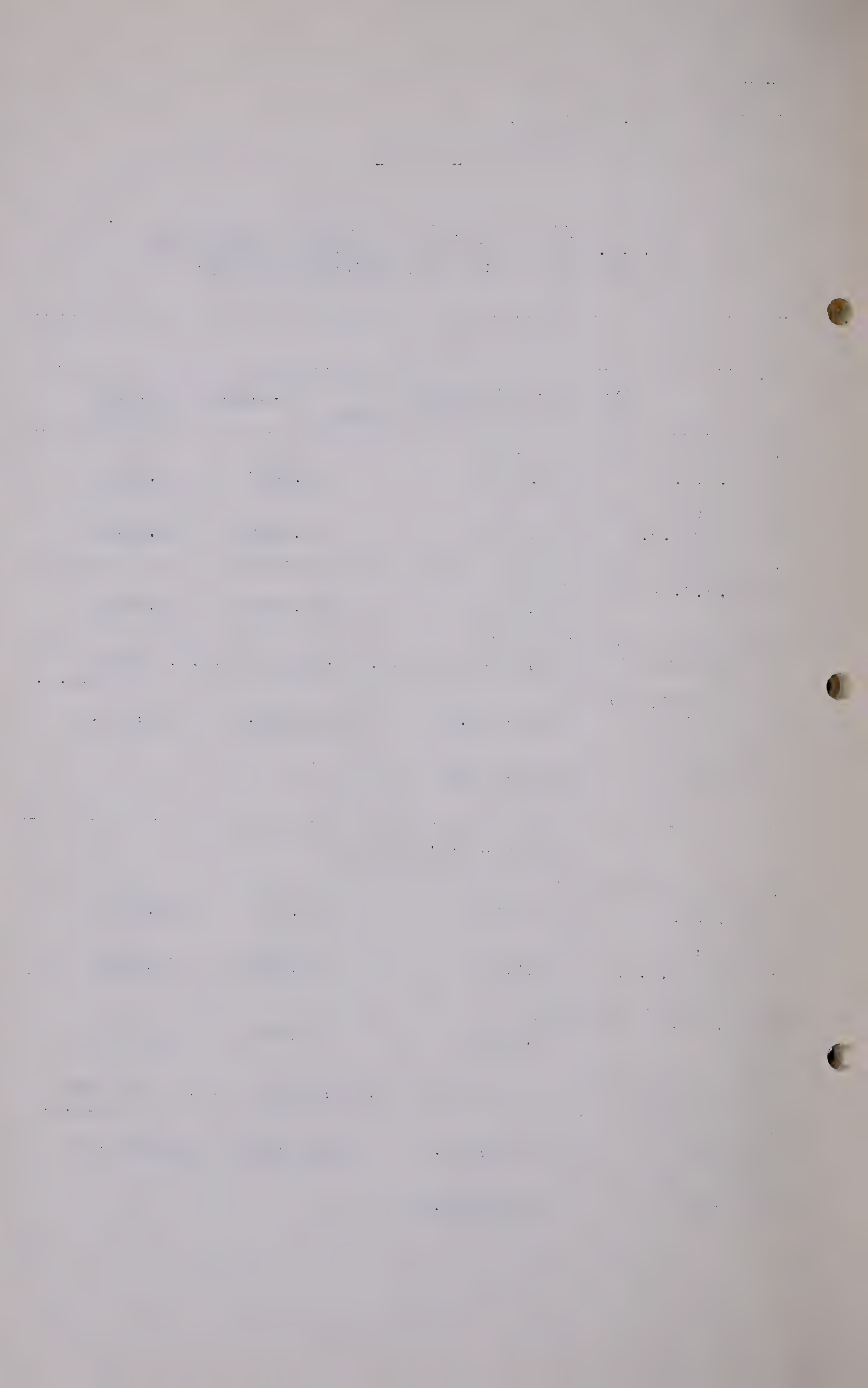
ON THE BASIS OF 12.347¢ average sale price per
m.c.f. and of net costs as shown on Statement 2
of Part VII of Argument Madison could pay:

1945

	Producers Directly connected to Madison System	B.A. System	G.O.R. System
Average Sale price per m.c.f.	12.347¢	12.347¢	12.347¢
Madison's average Cost per m.c.f.	6.0472¢	2.1313¢	10.3194¢
Amount available per m.c.f. to suppliers of gas	6.2998¢	10.2157¢	2.0276¢
Volumes delivered to Sales Market	12,509,244 m.c.f.	3,122,159 m.c.f.	878,068 m.c.f.
Amount available to suppliers	\$788,057.35	\$318,950.40	\$17,803.71
Total to all suppliers	\$1,124,811.46		

1945 - 1948 INCLUSIVE

Average sale price per m.c.f.	12.347¢	12.347¢	12.347¢
Madison's average cost per m.c.f.	6.2939¢	2.1244¢	10.8273¢
Amount available per m.c.f. to suppliers of gas	6.0531¢	10.2226¢	1.5197¢
Volumes delivered to sales Market	46,079,924 m.c.f.	10,933,484 m.c.f.	3,625,963 m.c.f.
Amount available to suppliers	\$2,789,263.88	\$1,117,686.34	\$55,103.76
Total to all Suppliers	\$3,962,053.98		



Argument by Mr. Chambers.

- 6789 -

Now, sir, there is a point that will come up and I am not in a position to do anything about it at the moment, and that is as to a specific price for the well-head gas, whether it should be uniform or different for different areas. In any event, I am not in a position at the moment, until I see the cost submissions of other parties and I would like to reserve the right to say something about that if necessary when those costs are available. And that is all at the moment, sir, I can say about the well-head price of gas.

I would like to deal briefly with another phase and that is the Price for Stored Gas and Conserved Gas.

First of all I would like to deal with gas to be stored in Turner Valley and Conserved Gas, as we have come to regard that term throughout the Hearing. Exhibit 47 upon which Dr. Katz' estimate of 361.3 billion cubic feet (Exhibit 52) is based shows:

Gas to be stored in Royalite's Gas cap - 1945-1955 (Table 2A)	21.9 billion cu. ft.
---	----------------------

That Exhibit also shows that the conserved gas, that is crude well gas marketed in lieu of Royalite's Gas Cap current share of the market (1957) (Table 8) 23.0 billion cubic feet.

Exhibit 47 (Table 8) estimates that storage in Royalite's gas cap will cease in 1955 and that in 1958 the gas so stored will be first marketed.

Gas was first stored in the year 1945.

In the result, therefore (on the basis of Dr. Katz' final estimate of 361.3 billion cu. ft. and Exhibit 47) none of the gas so purchased and stored will be

Argument by Mr. Chambers.

- 6790 -

produced or sold for the period of 13 years, that is from 1945 to 1957 both inclusive.

Exhibit 47 (Table 8) also shows that, on the basis of the 361.3 billion estimate, the last year for the purchase by Royalite of conserved gas will be 1957 when only some 47,000 m.c.f. will be purchased.

In Exhibit 99, Royalite indicated its willingness to purchase from crude well producers unscrubbed residue gas (in excess of such producers' share of the market) for storage and also as, or in lieu of, conserved gas, at the current well head price discounted on a 15 year basis at 8% per year (or at a discount factor of .31524).

The 15 year discount period referred to in Exhibit 99 assumed that gas would be repressured and conserved for a period of 13 years and that for the succeeding 2 years the crude well allowables would be sufficient to meet the market requirements.

I am now, sir, authorized to state, on behalf of Royalite, that if (in accordance with Katz' suggestion as contained in Volume 69, pages 5717-5722) the costs of gathering and compressing conserved gas and the costs of gathering, compressing and re-compressing stored gas be included in the current price of gas going to market, Royalite will be prepared to undertake:

(1) so long as Turner Valley is the sole source of supply for Canadian Western's market, to purchase:

(a) gas for storage in its Turner Valley Gas Cap (but not in Bow Island), and also

(b) conserved gas,

at the current well-head price, as fixed by the Board, discounted on the basis of a 13 year discount period

Argument by Mr. Chambers.

- 6791 -

at 8% instead of 15 years - or by a factor I have had worked out of .36769792,

(2) to resell to Madison (who would be directed by the Board to purchase for delivery to the market) - as I take it Dr. Katz' recommendation for delivery to the market - retably during the period 1958 to 1970 a like quantity of residue gas at the well-head at the price or prices to which the discount factor shall have been applied, and

any such gas not so purchased and paid for as provided in clause (2) to be Royalite's property freed of any trust, undertaking or obligation.

Now the reason I mention that last part, sir, is this. The situation might happen that Madison or no person else might ever want that gas, conceivably. It may not be probable and there would have to be, I suggest, in fairness some outside limit whereby the trust is returned.

Now as to gas stored in Bow Island.

Exhibit 47 (Table 2A) indicates that crude oil well gas will be stored in Bow Island during the years 1945 to 1948 to the amount of 4.1 billion cu. ft.

Dr. Katz recommended that all residue gas sold and delivered to Canadian Western downstream Madison's Scrubbing Plant should be considered as part of the market.

Vol. 69 pages 5707-5708.

(Go to page 6792)

C-1-1 10.45 a.m.

Argument by Mr. Chambers.

- 6792 -

During the year 1945 pursuant to the Board's orders No. 15 and 16 Royalite purchased and caused to be delivered to Canadian Western 744,823 cubic feet of scrubbed gas which was stored in the Bow Island field.

By Exhibit 173 Canadian Western proposes:

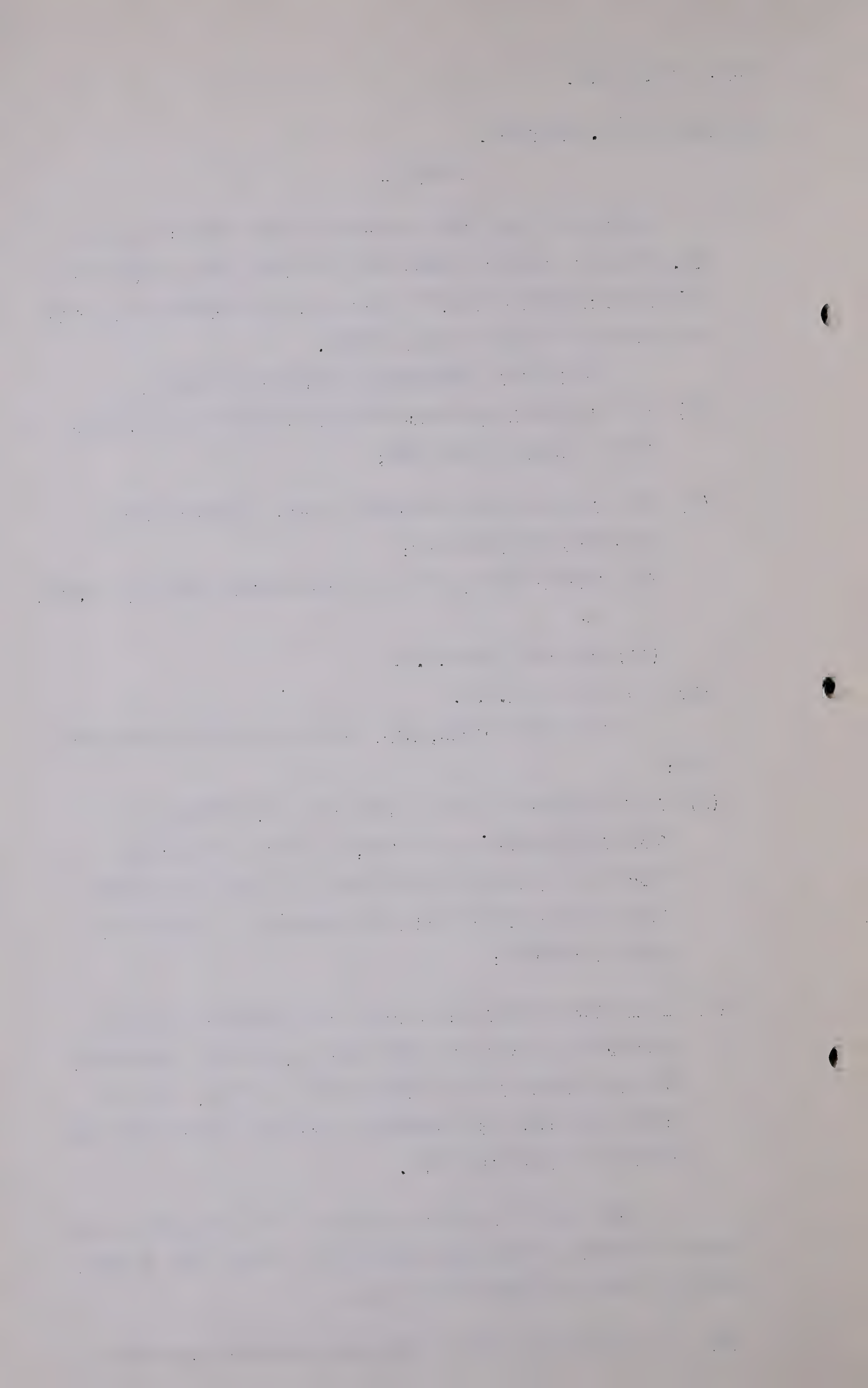
- (a) that it should purchase all gas stored or to be stored in Bow Island after 1944;
 - (b) that it should pay therefor a price equivalent to whichever is lesser of:
 - (i) Turner Valley well head price discounted by 0.315,
 - or
 - (ii) one cent per m.c.f.
- plus 2 cents per m.c.f.

I am authorized, Sir, to say on behalf of Royalite that:

- (a) it is prepared to sell or release its interest to Canadian Western in the 744,823 cubic feet of gas purchased by Royalite and stored in Bow Island during 1945 for the amount actually expended by Royalite in respect thereof;
- (b) I am also authorized to state that Royalite is also prepared to retain its interest in, and have marketed, the gas stored in Bow Island prior to 1945, that is some years back, in accordance with the draft contracts contained in Exhibit 173.

And one of the main things we are interested in in these contracts is that that gas should not be used in competition with the Turner Valley gas.

- (c) It is agreeable to Canadian Western's proposal as



Agrument by Mr. Chambers.

- 6793 -

set forth in Exhibit 173 with the exception of the one cent ceiling.

The Gas Company is to be the sole owner of that gas and I raise the point whether the one cent ceiling price is necessary.

And of course, the foregoing proposals or suggestions of Royalite are, of course, predicated on suitable safeguards or arrangements as to royalty chargeable and payable with respect to production.

And more for the purposes of the record, or to avoid going back to the Exhibit, I am just outlining what we did mention in Exhibit 99 about this royalty proposition, and in that regard Exhibit 99 filed on behalf of Royalite, recommends or suggests that:

- (a) that the owners of royalty interest in crude oil wells should, in respect of gas purchased at the discount price either for storage or in lieu of conserved gas, currently receive their royalty percentage of the discounted price at the time of initial production of such gas by the respective crude oil wells;
- (b) the 1/4 cent per m.c.f. minimum Crown royalty with respect to such gas should not apply and should be waived by the Crown.

The reason for that suggestion, of course, is obvious.

THE CHAIRMAN: But I have no jurisdiction.

MR. CHAMBERS: I know, Sir, but I understand the matter has been discussed with the Crown but they want to delay action until the whole picture has been gone over.

Argument by Mr. Chambers.

- 6794 -

THE CHAIRMAN: I believe it is under consideration at the moment.

MR. CHAMBERS: Yes.

(c) the royalty on gas produced from Royalite's gas cap, where gas is stored, should be dealt with in the following manner:

(i) reserves of Royalite's input wells should be now calculated and established;

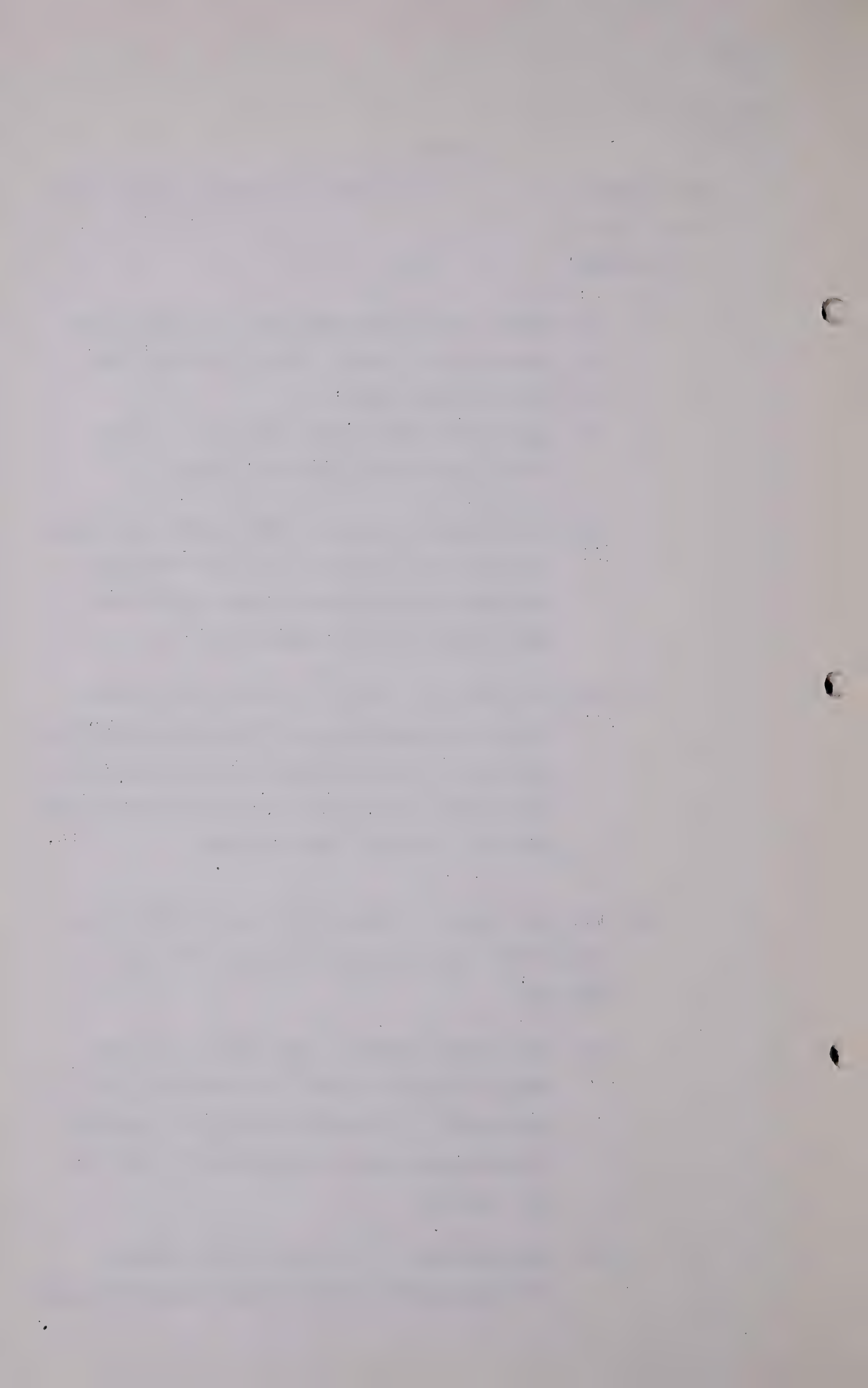
(ii) that records should be kept of all gas stored in such input wells in order to establish the relationship of the stored gas to the gas naturally in the formation;

(iii) that when the input wells are produced for market purposes the gas so produced should be deemed to be proportionately stored gas and formation gas and royalty, at the proper rate, paid only on the formation gas,

(d) that the royalty in respect of gas conserved in Royalite's gas cap should be dealt with as follows:-

(i) the royalty holder on Royalite's gas cap acreage should be given the privilege, by agreement, to receive currently his royalty, in accordance with the share of the well in the market.

(ii) that reserves of Royalite's own gas cap wells should be now calculated and established.



Argument by Mr. Chambers.

- 6795 -

(iii) that records be kept of all gas purchased, to meet Royalite's share of the market to cover conserved gas, in order to establish the relationship of conserved gas to formation gas;

(iv) that when Royalite's gas cap wells are produced for market purposes, the gas so produced should be deemed to be proportionately conserved gas and formation gas and settlement of royalty made on formation gas only,

Now, Sir, Mr. Stevens Guille has asked me to say that that 15-year discount is due, of course, to the change in estimated rate as to which the gas cap will probably be marketed.

THE CHAIRMAN: I am not quite clear, Mr. Chambers, the original period of 15 years was based on the estimated demand.

MR. CHAMBERS: Yes, that is right.

THE CHAIRMAN: Now what other figures have we to change that 15 to 13? There may be, of course.

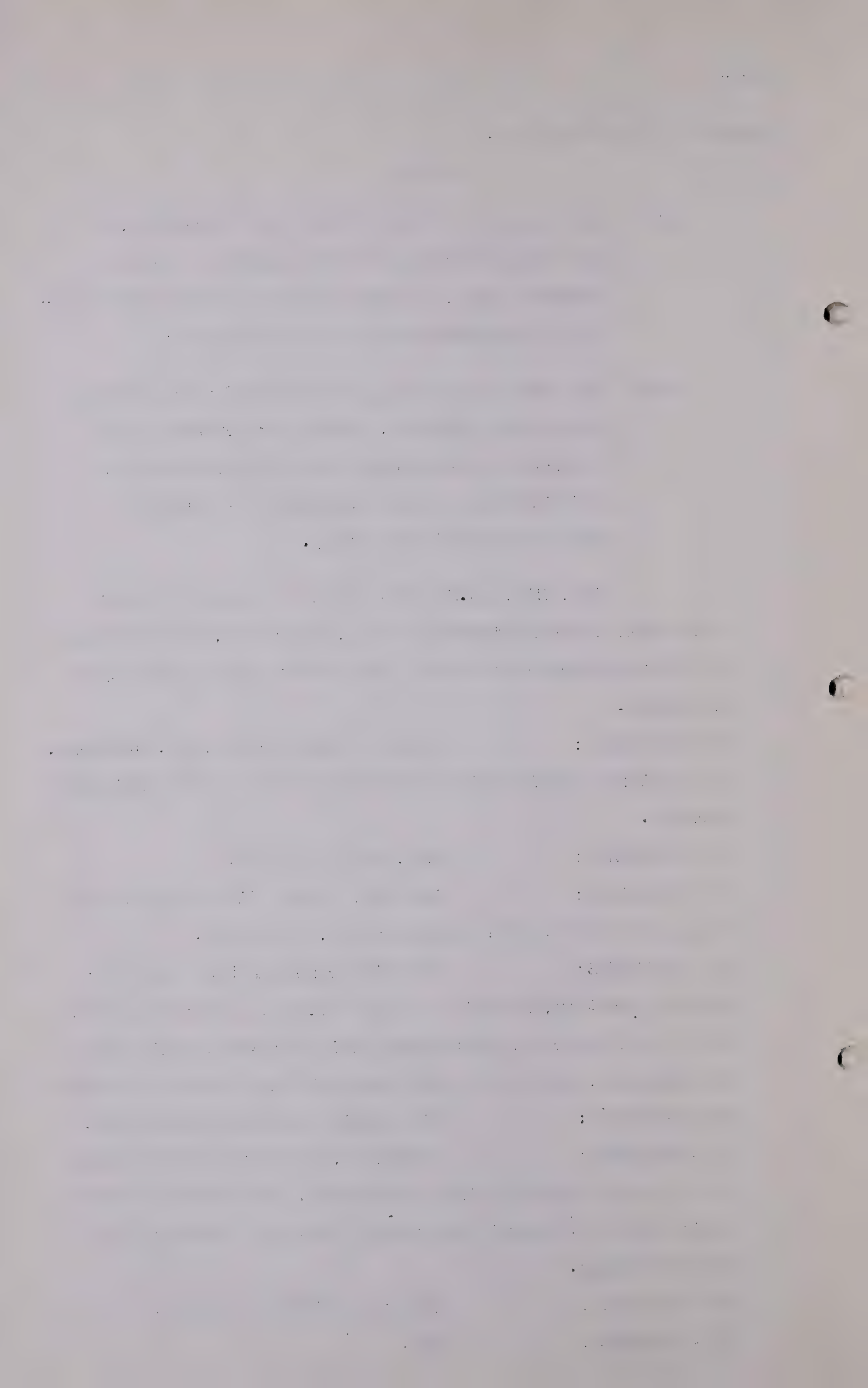
MR. CHAMBERS: You will remember there were two exhibits put in, Exhibits 48 and 47, and it depended first of all on the rate, or to what limit the crude wells would be produced, and that is one thing that made some difference.

THE CHAIRMAN: With limited pressure and so on.

MR. CHAMBERS: Certainly, and there was the rate that the gas would go into the market. Those were the two things and Mr. Brownie has revised his rate upwards of the market taking.

THE CHAIRMAN: Within the last two weeks.

MR. CHAMBERS: Yes.



Argument by Mr. Chambers.

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THE CHAIRMAN: That is right. It was first predicated on up to 1946, and the indication is that it will go on for four years more.

MR. CHAMBERS: Until the end of 1948.

THE CHAIRMAN: And that would change the amount of the consumption.

MR. CHAMBERS: Yes.

Now just to summarize briefly, I have, during the course of my argument, dealt with the various issues and problems before the Board as a result of the hearing, this long hearing that we have had, and of the Orders as construed, that the Board has heretofore made, and:

In Part I of my argument I dealt with the legislation and legal principles which, in my submission, are applicable and to which effect should be given by the Board.

In Part II I dealt briefly with the Turner Valley gas reserves:

Stored and conserved gas:

Market Demand for those reserves:

Market Sharing, and

Other Alberta Gas Reserves.

In Part III of my argument, it was directed to the Valuation of Madison's property and its rate base.

In Part IV I made my submission as to the fair net rate of return to be allowed Madison in the computation of the just and reasonable prices to be fixed by the Board for its services.

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Argument by Mr. Chambers.

- 6797 -

And in the next part,

Part V I dealt briefly with the matter of income taxes which should, in my submission, be provided for, and allowed, as any other item of expense.

Part VI dealt with how future depreciation should be, in our view, computed and provided for.

And then in

Part VII I presented a statement of the Madison's over-all costs, estimated for the remaining period, exclusive of administration and capital charges, that is for the period extending from 1944 to 1948, both inclusive.

In Part VIII I presented my submission as to the allocation of Madison's charges over the services performed or rendered by it for various classes of customers or parties served by its system.

And then in Part IX which I dealt with this morning, I dealt with the well-head price, although I have not made any definite or specific submission as to the actual figure therefor, as I feel that I am not in a position to do so until I have seen and considered the submissions and statements to be presented on behalf of the other gas utility systems operating in the Turner Valley area.

And in Part X I dealt with the basis or method of fixing the price to be paid for stored gas and conserved gas.

Argument by Mr. Chambers.

- 6798 -

Now, Sir, I would stress, in my view, that the legislation in question, The Natural Gas Utilities Act, is drastic and goes much further than any other public utility statutes of which I, at least, am aware in that it says that a commodity, natural gas, wherever produced in Turner Valley or elsewhere in the Province, cannot be used, sold or dealt in by its owner as, or at prices, which he may see fit.

Now I am not offering that in a critical sense of the legislation, but I submit that is the effect of the legislation.

I would also point out that this Province, in common with many other countries, is at present undergoing an intensive and expensive search for petroleum and allied products, including natural gas either alone or in association with petroleum.

I also suggest that the Province of Alberta, comparatively speaking, has yet to be developed.

The finding of petroleum and natural gas and the production thereof are highly speculative ventures. I think we will all admit that.

The processing and utilization thereof by the best and most up-to-date methods are subject to continual experimentation and improvement by means of the ingenuity, experience and venture, the taking of hazards, the taking of chances of these people in the business in order to supply the ever-increasing and more efficient demands of the community.

Now what I am leading to is this: that in my submission, the Board should, in applying the statutory requirements of "just and reasonable" keep in mind the fact that the finding and supply of natural gas, and also the installation of systems and equipment to handle and utilize it to general

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Argument by Mr. Chambers.

- 6799 -

advantage must, generally speaking, be accompanied by speculation and risk and that when these efforts, with respect to any specific area, have established known supplies and developed, by skill, by trial and error, in many cases in the past.....

THE CHAIRMAN: And that is what we are engaged in now, the trial and the error. I do not mean you alone, I mean all of us.

MR. CHAMBERS: I understand.

But when the production has been assured in any particular area, by skill, by trial and by error as in many cases in the past, systems and installations to handle those supplies, there should not then, and more especially at the initial application of the legislation, be too rigidly applied public utility principles and rates which have, in the main, grown up with respect to the regulation of telephones, electricity, artificial gas or even in large proven and well seasoned natural gas areas.

(Go to page 6800.).

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M-2-1 - 11.00 A.M.

Argument by Mr. Chambers.

- 6800 -

Now in the case of electricity, telephones and artificial gas, if there is an unserved market or area, the undertaker assumes no risk other than that of properly and soundly estimating the design and the costs of constructing and operating his plant to serve that market.

He does, of course, have to take into some consideration an estimate of his market and how fast it is going to grow.

Furthermore, before such an undertaker proceeds with his outlay, he is assured of his market by having first obtained either:

- (1) an exclusive franchise, or
- (2) a certificate of convenience, that we hear or read a lot of in the United States, or
- (3) an exclusive supply contract.

On the other hand I suggest the legislation that governs us in these proceedings:

- (a) has definitely taken away the assured market that existed prior to the enactment of the statutes,
- (b) it has resulted in Madison's being ordered and required in common with others to make further substantial capital expenditures,
- (c) it has definitely said that the owners or producers of natural gas must deliver and sell it as set by the dictation of a third party - the Board,
- (d) has in effect required parties to spend money on installations to gather, treat, store and deliver gas to Calgary and Lethbridge consumers so long as those parties may choose to take that gas in open competition with any other supply.

Argument by Mr. Chambers.

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Now I therefore submit that, under those circumstances and having regard to the change in expectations brought about by the enactment and application of The Natural Gas Utilities Act, this Board should construe and apply in a liberal sense, and I mean by that the pencil should not be sharpened or kept sharpened too keenly, that term, the "just and reasonable" rule (which the legislature has consistently used throughout the Act).

In my submission that "just and reasonable" standard demands and requires:

- (a) the application, through-out and in every instance, of the ordinary principles of natural justice,
- (b) No discrimination, direct or indirect been practised (both the common law and the statute itself clearly prohibit discrimination),
- (c) And that the fixing of gas prices with some relation to, and somewhere in the neighborhood of, the value of competing fuels.

I would also point out that the rate of return which I have asked the Board to fix is the rate of return merely on the rate base and not on the entire amount of the shareholders' investment in the business.

In other words, the return, at the rate so fixed, is only applied to, and computation on the working capital and the net depreciated amount of the actual plant and equipment as it stands from year to year.

The depreciation reserve (insofar as it consists of cash from time to time, that is not reinvested in actual capital additions) still remains in the business and available for additions as and when required.

Introduction

The purpose of this study is to investigate the effects of various factors on the growth of plants. The study was conducted over a period of six months, during which time the plants were grown under different conditions. The results of the study are presented in the following sections.

The first section discusses the methods used in the study, including the selection of plant species, the experimental design, and the data collection process. The second section presents the results of the study, showing the growth of the plants under different conditions. The third section discusses the implications of the results and the conclusions drawn from the study.

The study found that the growth of plants is significantly affected by the amount of light, water, and nutrients they receive. Plants grown under optimal conditions showed the highest growth rates, while those grown under suboptimal conditions showed lower growth rates. The results of the study have important implications for the field of plant biology and for the development of agricultural practices.

Argument by Mr. Chambers.

- 6802 -

Any such cash balances at the end of any year are not included in the rate base for the next year except only to the extent to which it may be required to be invested in capital additions during the year.

Now on the other hand, such moneys are held and stand available at all times for the future needs of the company unless and until it is taken out and returned to the shareholders by way of reduction of capital.

Now while it is likely true that such cash amounts will not be great during this first period to the end of 1948, thereafter they will I suggest become progressively greater.

And I submit that it is not usual, nor is it reasonable practice, to require or expect any company to reduce its paid-up share capital each year and then ask or require the shareholders from time to time again to increase their paid-up capital at a later date to take care of new capital additions.

THE CHAIRMAN: Is that not a matter for good management ?

MR. CHAMBERS: Oh certainly sir, but all I raised that for is that the rate of return that we talk about is not necessarily the rate that in practice would be allowed on every dollar that the shareholder has in the business. All I say is this, on the matter for the shareholders, that the Board in applying the test should I submit say what is usually reasonable in business. Whether it be a public company of a thousand shareholders. I say under those circumstances it is not reasonable to expect they would take the money out this year and put it back two years from now, and that is one of the elements to be considered in the rate of return; that there will be some

Argument by Mr. Chambers.

- 6803 -

money lying around for the period, maybe smaller or greater, that does not necessarily carry a rate of return.

The fact that Madison is a private company is beside the point, but rather the test is, or should be, what is ordinary reasonable practice for any company including one with thousands of shareholders.

I would also point out that the 9.04% net rate of return of the 678 companies for the year 1943 (shown on Exhibit 107, page 11) is computed and based on every dollar of the shareholders' net investment in the businesses, including surplus.

The same is true of the average rate of 9.47% for the period 1936-1942.

Finally, I say that the "just and reasonable" standard prescribed throughout the Act for the measurement of present day utility rates or prices necessarily requires a present day fair value of all property used and useful in the rendering of the services for which those rates or prices are to be fixed.

And in that connection I close with a quotation from an address or paper of P. McDonald Biddison and Ed. C. Connor delivered in 1939 to the Natural Gas Section of the American Gas Association on the subject of Fair Value and Fair Return.

It is interesting to note that the Chairman of the Natural Gas Section was Mr. Weymouth, who has been up here on various occasions. Mr. Biddison and Mr. Connor state, (and I submit these words are most applicable here):

"The elementary principles for the determination of fair value and fair return were engraved on stone tablets

CHAPTER I

The first part of the book is devoted to a general survey of the subject.

The second part is devoted to a detailed examination of the various

aspects of the problem.

The third part is devoted to a discussion of the various methods

which have been employed in the study of the subject.

The fourth part is devoted to a discussion of the various

theories which have been advanced in the study of the subject.

The fifth part is devoted to a discussion of the various

conclusions which have been reached.

The sixth part is devoted to a discussion of the various

methods which have been employed in the study of the subject.

The seventh part is devoted to a discussion of the various

theories which have been advanced in the study of the subject.

The eighth part is devoted to a discussion of the various

conclusions which have been reached.

The ninth part is devoted to a discussion of the various

methods which have been employed in the study of the subject.

The tenth part is devoted to a discussion of the various

theories which have been advanced in the study of the subject.

The eleventh part is devoted to a discussion of the various

conclusions which have been reached.

The twelfth part is devoted to a discussion of the various

methods which have been employed in the study of the subject.

The thirteenth part is devoted to a discussion of the various

theories which have been advanced in the study of the subject.

The fourteenth part is devoted to a discussion of the various

conclusions which have been reached.

Argument by Mr. Chambers.

- 6804 -

which Moses exhibited to the tribes of Israel and which read"

THE CHAIRMAN: But he broke them on one occasion.

MR. CHAMBERS: They have been re-written.

"Thou shalt not steal'. That law has not been repealed nor streamlined to meet the exigencies of the more abundant life."

One other short quotation from what they said:

"It takes little thought to arrive at the conclusion that costs cannot represent values of a utility property except during periods when price levels may be the same as when the cost was incurred and it can be easily demonstrated that, in the cases of utilities whose business is facing extinction, as in the case of many interurban and street railway systems, that reproduction cost new less observed depreciation does not represent value and that value may be far below cost regardless of price levels."

and dealing with depreciation, they state:

"Common sense tells us that the only loss in value to be deducted, if truth and fairness are the objectives, are the actual losses in value. The actual losses have nothing to do with any theory of depreciation, straight line or otherwise. They are matters of physical fact not ascertainable from census reports or anything else but the property and the conditions that surround it and are entirely independent of what may have been accrued annually to the reserve account or of what method may have been used to fix the rate of accrual, or of the balance in such

Argument by Mr. Chambers.

- 6805 -

account, whether it be too great or too little."

I would like to thank you, sir, for your patience in listening to this argument which has of necessity been long and I would like to reserve the right to talk about the well head price if occasion should arise.

THE CHAIRMAN: I think I should thank you, Mr. Chambers, for such an able, admirable and well constructed argument, and I know that it is going to be of tremendous help to me when the time comes when I have to write my decision.

Mr. Harvie ?

MR. HARVIE: I am ready to go on but I would like to go on this afternoon. It would be of assistance if I did have an hour or two just to revise parts of my submission which have been occasioned largely by eliminating matters that would be purely repetition in view of Mr. Chambers' argument and if it would meet the convenience of the Board and Counsel would it be possible to start at three o'clock this afternoon instead of at two and finish at five instead of four.

THE CHAIRMAN: Well we must think of the Reporters who worked until about twelve o'clock on Monday night and late again last night.

MR. McDONALD: I have a Producers' Committee meeting at three o'clock this afternoon.

THE CHAIRMAN: Well I am not going to think of a Producers' Committee. I am sure of that. I gave up a day on Monday which I would have liked to have had off in order to expedite this Hearing and I am not going to give up for the Producers' Committee, however important it may be. I am thinking of Counsel and also of the Reporters.

MR. McDONALD: I was thinking of my client more than myself.

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Argument by Mr. Chambers.

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THE CHAIRMAN: Surely you are not getting instructions at this late date.

MR. McDONALD: On one particular point, sir.

THE CHAIRMAN: Probably we will settle it this way by sitting from three to four although I am not altogether pleased.

MR. McDONALD: Well then I certainly can rely upon four o'clock.

MR. STEER: That is not out of consideration for you.

THE CHAIRMAN: All right, we will sit from three to four or five to ten minutes past four if you think you can finish in that time.

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Age Group	Percentage of Respondents
18-29	85%
30-49	80%
50-69	75%
70+	70%

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100

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H-2-1 3.00 p.m.

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3 P.M. SESSION

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MR. HARVIE: Mr. Chairman, in the preparation of my submission, knowing that I was following Mr. Chambers, I appreciated that there would be many matters that he would, in his able way, deal with, that would only be repetition for me to cover again. In his extremely complete and capable argument, on which I would like now to compliment and congratulate him, he more than fulfilled my anticipations.

I have, therefore, taken the opportunity, so far as time would allow, to revise my submission by deleting some of the points he covered, to which I have nothing to add, and I wish to thank you for giving me an hour's respite, Mr. Chairman, which will help me to do that.

It is now well over two years when, on March 24th, 1944, The Natural Gas Utilities Act was passed, and since that time, or in fact, even for some months prior to that date, many of us, now present, have been closely associated with the drafting of the legislation and in working under it since it was passed.

On that date you asked the parties interested to meet with you and your then joint member, Dr. Boomer, whose passing we all so greatly lament, both on account of his personality and the excellent qualifications for the work he was undertaking jointly with you. At that meeting I believe most, if not all the interests directly affected so far as the Turner Valley situation was concerned, were represented, and, at least in a general way, expressed their views.

As you will remember, for a year or more prior to the passing of the Act, the British American Oil Co. Ltd., The Royalite Oil Company Limited, the Madison

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Natural Gas Co. Ltd., and Gas and Oil Refineries Ltd., had been, in conjunction with members of the Conservation Board, studying their respective problems in the field, with a view to seeing just what could be done to better the rather unhappy situation that then existed.

Prior to the passing of the Act, the Royalite Company had undertaken some major expenditures on its own account, with a view to improving the situation.

The British American Company, long prior to the passing of the Act, had their engineers surveying the situation with a view to preparing recommendations dealing with the South End of the field and its operations therein, and had come to the conclusion that, in order to justify any substantial capital expenditures, it would be necessary to work out some arrangements with Royalite and other interests for each to concentrate their respective gas operations in specified areas of the field.

At least a year before the passing of the Act negotiations for the exchange of Gas Processing Contracts were under way, and, by the summer of 1943 had progressed to the stage whereby a definite agreement had been worked out between the Royalite and British American Companies under which, generally speaking, the Royalite turned over to the B.A. all its gas processing contracts covering wells in the South End of the field, which we will now call the B.A. area, and the B.A. had turned over to Royalite all the former's contracts in the North End of the field, that is, the Royalite area.

I believe that Gas & Oil Refineries Ltd., also made some similar arrangements, and I would like to here mention that throughout all these negotiations, and,

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in fact, those that have been carried on since, there has been an excellent spirit of co-operation among these three companies, and it was only on that account that such satisfactory progress had been made.

This arrangement paved the way for the Royalite and B.A. Companies to undertake developments that would lead to more economic and better conservation operations throughout the field.

I believe it was realized by all parties, including the Government, the Conservation Board and the Producers, as well as the operating companies, that before any material investment could be undertaken in the South End of the field, it was necessary to make some arrangements that would allow gas from that area of the field to participate in the Calgary gas market.

On the basis of assurances received that such an arrangement would be worked out, the British American Oil Company decided, some time prior to the passing of the Act, that it would be prepared to proceed, at its own risk and expense, with the installation of much the same system as has now been installed under the Order of this Board. It was felt that, in co-operation with the South End Producers, it would be possible to work out some type of agreement with them that, having regard to all the circumstances, would justify the expenditure. It was also felt that it would only be a comparatively short time before some upward adjustment would be made in the price being paid for the gas for the Calgary market.

As a result of these investigations and negotiations, which had taken place prior to the passing

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of the Act, both the B.A. and Madison Companies had propositions that were reasonably concrete to discuss at the first meeting of the Board, held on the 29th of March, 1944, which, you will remember, was five days after the passing of the Act.

From the general outlines of the scheme submitted by the various parties, and comments made by others attending the meeting, it was apparent that the proposals of the various operators did not fit in with each other in a satisfactory manner. However, there did appear to be a possibility of some general scheme being worked out that would be satisfactory, and, toward the close of the meeting, you, Mr. Chairman, suggested that the Royalite, Gas & Oil Products, and our client, should meet during the following two weeks to see if some mutually satisfactory plan could be worked out and submitted, failing which, each of these parties was requested to submit separate plans by that date.

Here again, the co-operation shown, both between these Companies and the Conservation Board, resulted in the B.A. submitting its proposal in a general way under date of the 21st of April, 1944, and Madison submitting a new proposal, both of which were further considered by the Board at the meeting on the 9th of May, and, by early June, your Board granted authorizations to both Madison and B.A. to proceed with their installations along the lines of their respective submittals.

I think it will be agreed that, having regard to the most difficult conditions with which the Companies were then faced, in regard to securing both equipment and labour, there was no delay in completing the

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installations, as by the end of the year the new B.A. system was in full operation.

As all parties realized that the Board was not in a position to make any final, or possibly, binding Order, covering the expenditures until after a complete Hearing had taken place, and that, even if it could, it would be better to do so after the installations were completed and some operating experience obtained, the Madison Company and the B.A. Company, in view of the urgency of the situation, voluntarily agreed to proceed with installations on the basis of interim Orders and directions.

A lot of water has gone under the bridge since the first meeting of the Board on March 29th, 1944.

The preliminary proposals were submitted and considered.

Directions were given to proceed with installations,

Installations were commenced and completed.

A year or more of successful operations have been completed.

The Board's Hearings have now been going on for nearly a year and a half, and we have heard much evidence on many subjects - much of which has been most useful and instructive - some possibly otherwise.

So far as the B.A. Gas Utilities Ltd. is concerned, it has been in operation for about that time and has had the benefit of that experience.

While there may be opinions expressed

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to the contrary, I feel that on the whole, and without reference to any particular party, a splendid over-all job has been accomplished, and that the Act and the operations undertaken thereunder have been well justified.

Throughout the Hearing there have been suggestions, comments and criticisms, both constructive and otherwise, and I don't think any of us can emerge without benefiting by the information obtained, the suggestions submitted and the criticisms received.

I know our Company has, in its instructions to me for the preparation of this argument, taken full advantage of the benefit of having our submissions and actions criticized, and of the opportunity of having explained to us the problems and difficulties of others concerned, and I cannot help but feel that its recommendations to this Board are being submitted having in mind not only its own problems, but those of others, and that every effort has been made to treat all on as uniform and equitable basis as possible.

In making these recommendations careful consideration has been given to the evidence and, with the benefit of our greater knowledge of the whole situation, and the problems of the others interested, we have, without hesitancy, adopted the submissions or suggestions of others, where we considered them an improvement over ours, even though, in some cases, they might not be as beneficial, as we felt that with so many varying interests, and difficult and complicated matters arising, it was in the interest of all to adopt a policy of "give and take" in the interests of uniformity and fairness.

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May I say here that I believe if out of this long and expensive Inquiry, there emerges a set of precedents that can guide and be followed by us in the future, we will, at least, have accomplished a great deal.

Now I propose to outline and compare conditions existing in Turner Valley at the time of the passing of the Act with those now prevailing, and see what we have accomplished.

While for some 10 years prior to 1943 there has been a very definite trend of legislation directed toward the enforcement of conservation in Turner Valley, it was possibly during that year the trend took definite form, which crystallized in the passing of The Natural Gas Utilities Act, in the early Spring of 1944. It might, therefore, be of interest to look at the situation as it existed during 1943, and compare it with the year 1945, which was the first year that that Act was, at least in partial effect, and then check that year with the year 1946, when we might say that the full force of the Act has been given effect to, at least in so far as the South End of the field is concerned, where the B.A. Gas Utilities' system has been put into operation.

We find from Conservation Board figures that in the year 1943 that of the 44 billion cubic feet produced from the field as a whole, only 30 billion was processed in Absorption Plants. 14 billion went to the market and 22 billion, representing 50% of production, was flared.

Now, those figures really do not add up and that is explained by the fact that of the gas processed in the absorption plant 8 billion feet was flared

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Argument by Mr. Harvie.

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as residue gas or consumed in operations.

For the same year in the B.A. area the situation was materially worse, occasioned by the fact of it not sharing in the market.

In that area, of the 7.7 billion produced, 5 billion, being 65% of total production, was flared.

In the year 1945 the comparable figures are:

The field as a whole -

Gas produced	37.6 billion
Gas flared	7 Billion or 18%

This showed a reduction of gas flared over the whole field of 50% to 18%.

In the B.A.area, for the year 1945:

Gas produced	7.3 billion
Gas flared	1 Billion or 13%

or a reduction of flared gas from 65% of that which was produced to 13% of the gas produced.

It should be pointed out that of this 13% flared a large portion was accounted for by production from new wells not yet connected.

It might be noted here that the gas actually flared in the B.A. area for the year 1945 was comparatively negligible, and as it was the first year of operation, there were a great many mechanical and operating kinks to be ironed out, which would account for some, if not a large portion, of the gas flared. As these operating difficulties are being overcome, we would be justified in expecting that all flaring will, to all practical purposes, disappear throughout the entire B.A. area, excepting for those few

Argument by Mr. Harvie.

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cases where it has been the joint judgment of the Conservation Board and the Company that the expense involved in connecting some of the distant wells would not be justified for the time being, although it might be pointed out that consideration is presently being given to connecting these wells to this system, which will, in effect, eliminate all flaring.

I think it can well be said that the installation of the B.A. Gas Utilities system as directed by the Board under the Act, has accomplished its purpose in this area of the field 100%.

THE CHAIRMAN: Excepting, of course, Mr. Harvie, I must interject, although we ordered you to do it, we did it at your urgent solicitation. I think it is only fair that I should put that on the record along with your own remarks.

MR. HARVIE: Well, I quite agree with that, but that was, I think, a point that I propose to cover now, Mr. Chairman, that may be will explain it. I certainly do not want to leave any thought on the record, or any place else, that the situation that you have just mentioned was not the case.

We compare this to the results that would have been accomplished under some of the other Plans.

Firstly, the Weymouth Plan. If the Weymouth Plan had been put into effect, it might properly be said that practically no conservation, other than that which could be attributed to the installations then in existence would have been effected in the South End of the field, as this plan did not contemplate the installation of

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any new equipment to handle any gas below 600 lbs. and there would be little, if any gas of this nature in this area of the field.

And then the Madison "A" Plan. If the Madison "A" Plan had been proceeded with, some, but little, improvement over the Weymouth Plan would have been effected. Madison "A" Plan only contemplated handling the residue gas from the B.A. Absorption Plant system, which could be produced as residue gas at approximately 150 lbs. and which, according to the evidence, would have been approximately 18 billion cubic feet as of the 1st of January, 1944. This figure must be compared with the results the B.A. Utility installation accomplished, which took the gas down to atmospheric and would increase this reserve to approximately 70 billion cubic feet, i.e. an increase of some 50 billion cubic feet.

It is also of possible interest to examine the operating conditions of the various gas gathering units prior to the passing of the Act. These might be summarized as follows:-

Firstly, the Madison's high pressure lines were operating on an intake pressure of approximately 375 lbs. This meant that all gas of a lower pressure was lost except for some 12 million feet a day, representing 17% of total production which was handled through Madison No. 3 low pressure station, which, in turn, operated an intake pressure of 60 lbs. This meant that any gas between 60 lbs. and atmospheric was lost.

THE CHAIRMAN: Mr. Harvie, may I interrupt you again? You are doing what we all do, and that is when you

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Argument by Mr. Harvie.

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are reading you read just a little bit too fast.

MR. HARVIE: Yes,

THE CHAIRMAN: If you could just slow up a little bit. I am getting all you say but I would just like to get it a little better. I mean, I do the same when I read, I read it much faster than otherwise.

MR. HARVIE: I thank you for drawing my attention to it, Mr. Chairman.

MR. CHAMBERS: Would you mind repeating that last part? We did not get it down here.

MR. HARVIE: Yes.

Firstly, Madison's high pressure lines were operating on an intake pressure of approximately 375 lbs. This meant that all gas of a lower pressure was lost except for some 12 million feet a day, representing 17% of total production which was handled through Madison No. 3 low pressure station, which, in turn, operated an intake pressure of 60 lbs. This meant that any gas between 60 lbs. and atmospheric was lost. Under either the Madison "A" or "B" Plan we understand it was not contemplated taking any gas at any time below 50 lbs., with the result that throughout the entire area of the North End all gas between 50 lbs. and atmospheric is lost, and continues to be lost for all time.

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- (b) GAS AND OIL REFINERIES LIMITED were operating their gas gathering lines at an intake pressure of 75 lbs., which would mean that all gas produced below that pressure is lost, and will continue to be lost for all time, except any that is from time to time connected to the B.A. Low Pressure System, or the Madison system and at present a little of it is being taken into the B.A. Low Pressure System.
- (c) THE BRITISH AMERICAN GAS GATHERING SYSTEM, installed in connection with its Absorption Plant in the South End of the field, was operating at an intake pressure of 175 lbs., which would provide for the handling of approximately 18 billion cu. ft., but which intake pressure, according to the evidence, might have been reduced to increase this figure somewhat.

As the B.A. new installation gathers all gas down to approximately atmospheric pressure, there is no loss, which, we submit, clearly indicates the value and efficiency of this system compared with any others in existence or contemplated.

It is of interest to note the additional capital cost that is required when handling gas in low pressure areas as compared to handling gas in a high pressure area. The following two illustrations will possibly sufficiently illustrate this point.

Argument by Mr. Harvie.

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EXAMPLESBRITISH AMERICAN GAS UTILITIES LTD.RATE BASECapital Costs Variations on account of varying pressures.Theoretical Case #1

Assume a line 10,000' long with valves at both ends to handle 6000 m.c.f. per day.

	<u>Operating Pressure</u>	<u>Line Size</u>		
Case 1.	375#	6"	10,000 x 1.94	19400
			Valves	254
				<u>\$19654</u>

Exclusive of anything but that equipment.

Nothing to do with laying or anything else.

Case 2.	150#	8"	10,000 x 2.54	25400
			Valves	224
				<u>\$25624</u>
Case 3.	10#	12"	10,000 x 4.55	45500
			Valves	424
				<u>\$45924</u>

List price for pipe	6"	\$1.94
	8"	\$2.54
	12"	\$4.55

So to take the capital cost of this line and valves alone for 10,000 feet length of pipe to handle the same quantity of gas per day, first at 375# it is approximately \$20,000; at 150 lbs. approximately \$25,000 and at 10 lbs. approximately \$46,000. and the detail of that will appear in the record. That is so far as the pipe, the cost of pipe feature is concerned.

The second illustration is a Theoretical Case in connection with the cost of compressing gas. I think the evidence has disclosed that it takes a great amount of equipment and a much greater capital cost per unit to compress gas from atmospheric to 100 pounds than it does

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from 100 to 200 and so on in decreasing amounts, and this is one illustration.

Theoretical Case #2

Investment in Compressors using only prime cost, i.e. exclusive of freight, duty, etc., in B.A. area where Gas Gathering operations are carried on at pressures ranging from atmosphere to 175# approximates \$5080 per M.MCF. per day, or, for 6000 M.C.F. per day \$30,480

The corresponding investment cost in Royalite area where Gathering operations are carried on at pressures from 60# to 375# would be \$2525 per M.MCF. or for 6000 MCF per day \$15,150.

In other words the cost in the low pressure area is just about double that in the high pressure area.

Now, Mr. Chairman, in actually carrying on the operations in the field there are two or three or more factors that have to be established and formulae adopted and the first of these is the establishment of the gas reserves, second, the sharing of the market and third, repressuring operations and pooling arrangements required in the South End of the field. I am only addressing my remarks to the South End.

First I propose to deal with Gas Reserves and I take these as of 1st January, 1945.

Numerous witnesses have given varying estimates of the gas reserves in the Turner Valley field. I believe it might be said that no two of them approached the matter in the same manner and, in some cases, used

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different factors. The result was that at first the various estimates appeared to be very different, but when these were analyzed, having in mind some factors such as, the date the estimate was made, the total acreage included, bottom and top hole pressures, and similar items, it was found that when these were adjusted to common factors there was a remarkable similarity in the estimates - so much so that our Company, and, I believe, others, were more or less prepared to take any of the estimates submitted. Fortunately, however, the necessity for this disappeared when, through the kindness of the Board, it had Dr. Katz analyze all figures given and submit his estimates which are now being adopted by us, and, I believe, by other parties.

It must, however, be pointed out that, particularly in so far as the estimates apply to the B.A. area, we cannot just take the figures given by Dr. Katz, I think you will remember they were summarized in a letter of the Conservation Board that was filed as an Exhibit yesterday, as these must again be broken down and adjusted so that they can be made applicable to working and operating conditions in that end of the field. For instance, where Dr. Katz has given an estimate based on abandoning a well at a pressure of 100 lbs., this figure has to be adjusted to meet the operating conditions to which the reserve is applicable. In other cases, Dr. Katz gives dry gas figures which must be adjusted to a wet gas basis for certain purposes. We have, therefore, prepared the following statement, based on Dr. Katz's figures as supplied by the Conservation Board in its letter of the 26th of February 1946, (Exhibit 178), broken down or adjusted so they can be

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used in connection with our submissions:

I will not read these into the record but I think they are the same as were universally adopted.

	GAS CAP		CRUDE		TOTAL	
	Wet Gas	Dry Gas	OIL Wet Gas	GAS Dry Gas	Wet Gas	Dry Gas
B.A. Area	28.6	22.5	37.1	23.0	65.7	45.5
G.O.P. Area	17.9	14.4	13.8	8.6	31.7	X 23.0
Madison or remainder of field	168.7	170.0	140.1	107.0	308.8	277.0
	<hr/> 215.2	<hr/> 206.9	<hr/> 191.0	<hr/> 138.6	<hr/> 406.2	<hr/> 345.5

X Total Dry 23
reduced to 20

Figures represent reserves as of 1st January 1945.

Stated in Billion C.F. measure at 14.4# 60 deg.F.

THE CHAIRMAN: Did you deal with that letter by replying to Mr. Bailey, Mr. Harvie? I do not remember. Did they not suggest that you might express your concurrence or otherwise?

MR. HARVIE: I think whether we did it formally or not, we certainly have been talking with Mr. Bailey since and I think we assumed they were satisfactory. They are to us I know.

THE CHAIRMAN: I do not think I have anything on file from any one of you as a matter of fact in reply to that letter.

MR. HARVIE: Did we ever reply to Mr. Bailey's letter?

MR. : My recollection is we did.

MR. HARVIE: Apparently we did.

MR. McDONALD: I think I did also.

Argument by Mr. Harvie.

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THE CHAIRMAN: I may have it ~~but~~ my file is not here and I do not attempt to remember them all. I am sorry for interrupting you, Mr. Harvie.

MR. HARVIE: The next item is market sharing.

There are, generally speaking, two markets, namely:

- (a) The one that we propose to call the "Madison market", which is the large and most remunerative one, and the one in which all producers are interested in obtaining their full share. It covers the gas scrubbed in the Madison main scrubbing plant and includes all scrubbed gas as differentiated from unscrubbed gas sold. This market includes sales to Calgary Gas Company, Bow Island field, the Madison Company for its operations other than in the scrubbing plant, the Royalite Oil Company, Valley Gas Company, Valley Pipe Line and possibly others.

Then there is the second market which I define as "Field Markets".

- (b) FIELD MARKETS This covers the gas sold, either before or after passing through the Absorption Plants, which has not been delivered to the Madison Scrubber. At times some of these sales might be made directly by the producer - at other times by the Utility Companies. It has been the practice, and we submit a proper one and one that should be continued, not to include these sales in the general market that is shared by all producers throughout the Valley, but rather to let them be dealt with by the individual parties making the sales in such manner as might be required by their contracts. It is on the basis of this procedure being

continued that the formula that we propose to submit for the sharing of market has been compiled, and is in accordance with the recommendation of Dr. Katz.

Those are, I think, what have been referred to generally as drilling fuel in the field and items of that kind.

The matter of working out a formula for sharing the Madison market in a manner that will be equitable to all parties, having regard to the numerous varying conditions, operations, etc. has been given a great deal of thought by all parties concerned. At first numerous suggestions were submitted, none of which were mutually agreeable, but, as time went on and conditions were better understood by all parties, a great many of the problems were solved, and again, through the kindness of the Board, we had the assistance of Dr. Katz in working out a formula which, at least in principle, we believe is agreeable to all parties, and it has just been a matter of putting it in writing. After a recent conference with the parties affected, we have drafted a formula which we believe meets the situation, and have submitted copies to those parties for comments. While this formula may not be in final form, we look for little difficulty in ironing out any details that may be necessary, so that it can be unanimously adopted.

I might say in that regard, Mr. Chairman, that as Exhibit 179 the Madison filed a formula compiled by it and I presume based on Dr. Katz' formula also. It is quite possible that both of these, it and the one we are filing are the same, but so far we have not had an opportunity to analyze them. In any event we do not anticipate any

Argument by Mr. Harvie.

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difficulty in agreeing between ourselves in final form.

THE CHAIRMAN: Do you want to file it now, Mr. Harvie?

MR. HARVIE: It might be as well for the purposes of the record.

DOCUMENT NOW MARKED
EXHIBIT 183.

MR. HARVIE: These will be bound and delivered to every person in the morning, along with some other exhibits. I have one copy here to be marked now.

THE CHAIRMAN: It could be described as the B.A.'s proposal for market sharing position.

MR. HARVIE: That will be that title.

As actual operating conditions both of the area, as well as wells and different classes of wells vary, and are subject to Order of the Conservation Board, we submitted a copy of our draft formula to that Board for consideration, and would point out that we think it essential that any formula adopted by the operators in the field should be approved by the Conservation Board, as well as by this Board.

THE CHAIRMAN: They do not like me interfering with their jurisdictions, Mr. Harvie, and I do not think I like them interfering with mine either.

MR. HARVIE: I am quite prepared to leave it between the two Boards who signs the Orders and who approves. There are factors in which I think that they possibly come under both their jurisdiction and yours.

Now the next general item is Pooling.

POOLING ARRANGEMENTS COVERING CONSERVED AND/OR REPRESSURED GAS BRITISH AMERICAN AREA.

The problem of handling the excess gas produced over that required for market is proposed to be

Argument by Mr. Harvie.

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dealt with by the British American Gas Utilities and the producers connected to its system in a different manner than that proposed by Madison and the producers connected to its system in the North End of the field. Our present submittal deals only with the proposal respecting the British American area.

Our Company feels that while primarily this problem is one of the producers, at least indirectly the B.A. Utilities Company is interested and so it has been active in co-operating with the producers in working out some satisfactory solution of this problem.

I differentiate there, Mr. Chairman, as between the B.A. Utilities Company and the B. A. Oil Company, which is interested itself as a producer.

We believe that as the matter is one primarily affecting the production of wells and of returning surplus gas to formation by repressuring, it is a matter to be dealt with by the Conservation Board in the first instance, although we feel it will ultimately be necessary for this Board to approve of the final arrangement, as there are certain phases, such as accounting and payment, over which we believe this Board has jurisdiction.

Mr. McDonald, on behalf of the Producers' Committee of the South End Producers, filed with this Board as Ex. 89 in the current Hearing a formula, which I believe met the situation existing at the time in a general way. This exhibit has been given further consideration, both by us and the producers generally, as a result of which a new one is proposed, which I think the parties believe should take the form of an Order of this Board approved of by the Con-

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servation Board. I understand Mr. McDonald proposes to submit a draft of this Order while making his submission, so possibly I might be allowed to speak to it at that time, if necessary, rather than do so at the moment.

THE CHAIRMAN: That is going to come in before we finish this argument is it? .

MR. HARVIE: I understand Mr. McDonald will be presenting that.

MR. McDONALD: My position is we are all agreed on the principle but not on the accounting. The Canadian Utilities are doing the accounting. I have a submission which I am taking up with Mr. Donellan and his staff and when it is ready we will put it in, possibly the first of the week. It is purely a matter of accounting.

MR. HARVIE: I do not think there is anything in dispute.

MR. McDONALD: No, nothing in dispute.

THE CHAIRMAN: It is something in which some other person might be interested and who ought to be heard on it.

MR. HARVIE: No, other than our company and Mr. McDonald representing all the producers.

THE CHAIRMAN: Would it affect the Gas Company for instance?

MR. HARVIE: Not at all, I think.

MR. McDONALD: I do not think so. It has nothing to do with the existing mechanical operations of individual wells. It does affect the Conservation Board but I think outside of the Conservation Board the Canadian Utilities and the Producers are the only parties who can possibly be

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interested. The net amount of stored gas will be the same.

THE CHAIRMAN: It might be something that you gentlemen have agreed on that I might think quite wrong.

MR. McDONALD: That is a possibility too. But I think it is in general conformity with Exhibit 89, Mr. Chairman.

MR. HARVIE: I think it has received the approval of Dr. Katz.

MR. CHAMBERS: The matter of royalties will be in the picture, will it not?

MR. McDONALD: Yes, I intend to deal with that too.

THE CHAIRMAN: What I have in mind, Mr. McDonald, is the allocation of costs as between the Absorption Plant, the Producers and the ultimate consumer.

MR. McDONALD: Yes, this particular Order has nothing to do with the amount of gas that is going to be repressured. It is a matter of who is going to own the gas after it is stored and the ownership of the gas, nothing to do with the cost item at all.

THE CHAIRMAN: It is your residue after you have arrived at your market sharing position?

MR. McDONALD: Yes, there is no money involved, except the gas itself. A book-keeping of the cost entry.

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MR. HARVIE: I think it will be of assistance to this Board in being able to allocate those costs which you suggest and I think later in our submission we will deal with that phase of our position, as we do not own that gas at any stage. We are purely an utility company. It is something we are glad to co-operate in working out the most efficient system but it is really the producers' problem.

THE CHAIRMAN: What I had in mind was that I do not want an order filed and consented to by you two gentlemen, to which other persons might have the right to object, without giving them the opportunity of being heard.

MR. McDONALD: Yes.

THE CHAIRMAN: If it is only a question of the residue after the market.

MR. McDONALD: Yes, it is really a matter of bookkeeping.

MR. HARVIE: We are quite prepared to see that any person who thinks he may be interested gets a copy of it.

Now Mr. Chairman, the next point is the "rate base" and there are two or three moments that I might take up with preliminary remarks but then I come to the large statement where I would like an uninterrupted hour so that I may deal with it all in one part. After all it might not take that long but I would like to finish it once I start but I can take another few minutes here and get to that point, or if it is a convenient place to adjourn we might adjourn now, and I will have no difficulty in finishing tomorrow morning.

THE CHAIRMAN: If you have something you can keep going on and finish, Mr. Harvie, I would like you to do it.

MR. HARVIE: There is nothing I can really keep going on with for any length of time, unless I stop in the middle of it

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and I do not wish to do that.

THE CHAIRMAN: I just have to remind you that I have some thirty-four jurisdictions under twenty-two different Statutes and I cannot stay too long in Calgary.

MR. HARVIE: I am very glad to go on with this then now.

THE CHAIRMAN: I do not wish to force you on, Mr. Harvie, but if there is something you could start and finish, all right, but if you have not, then we will just adjourn and give you what you want, an uninterrupted hour.

MR. HARVIE: The next subject I propose to deal with is the "rate base".

THE CHAIRMAN: Mr. Harvie, if you do not want to start that and you cannot finish it, I do not wish to force you to do so.

MR. HARVIE: Well I think there are a few moments anyway that we can use usefully on that, on the general phase of it. It is really when I come to the main statement that I would not like to interrupt - -

THE CHAIRMAN: It is when you come to the details you want the uninterrupted hour ?

MR. HARVIE: Yes.

THE CHAIRMAN: Very well.

MR. HARVIE: When the Board has determined gas reserves, and the market sharing and pooling formulas, it must then apply these factors to the actual costs of installations and operation and allocate such costs to the various parties then benefiting therefrom and we now turn to the consideration of these items and for this submission we have based our figures on the Katz estimate of Gas Reserves and the suggested Market Sharing and Pooling Arrangements hereinbefore discussed.

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While the various phases covered in our recommendations will be dealt with separately, I believe it might be helpful to summarize at least some of them at the present time, as follows :

1. RATE BASE. We recommend that the Rate Base be the amount of -

(a) In respect to existing equipment brought under regulation for the first time should be valued at the fair new replacement value at date of taking over, to the extent that it is used and useful, less observed depreciation, and

(b) New equipment directed by the Board to be installed should be included at actual cost plus proper allowances for administration, interest during construction and similar items, and the third item:

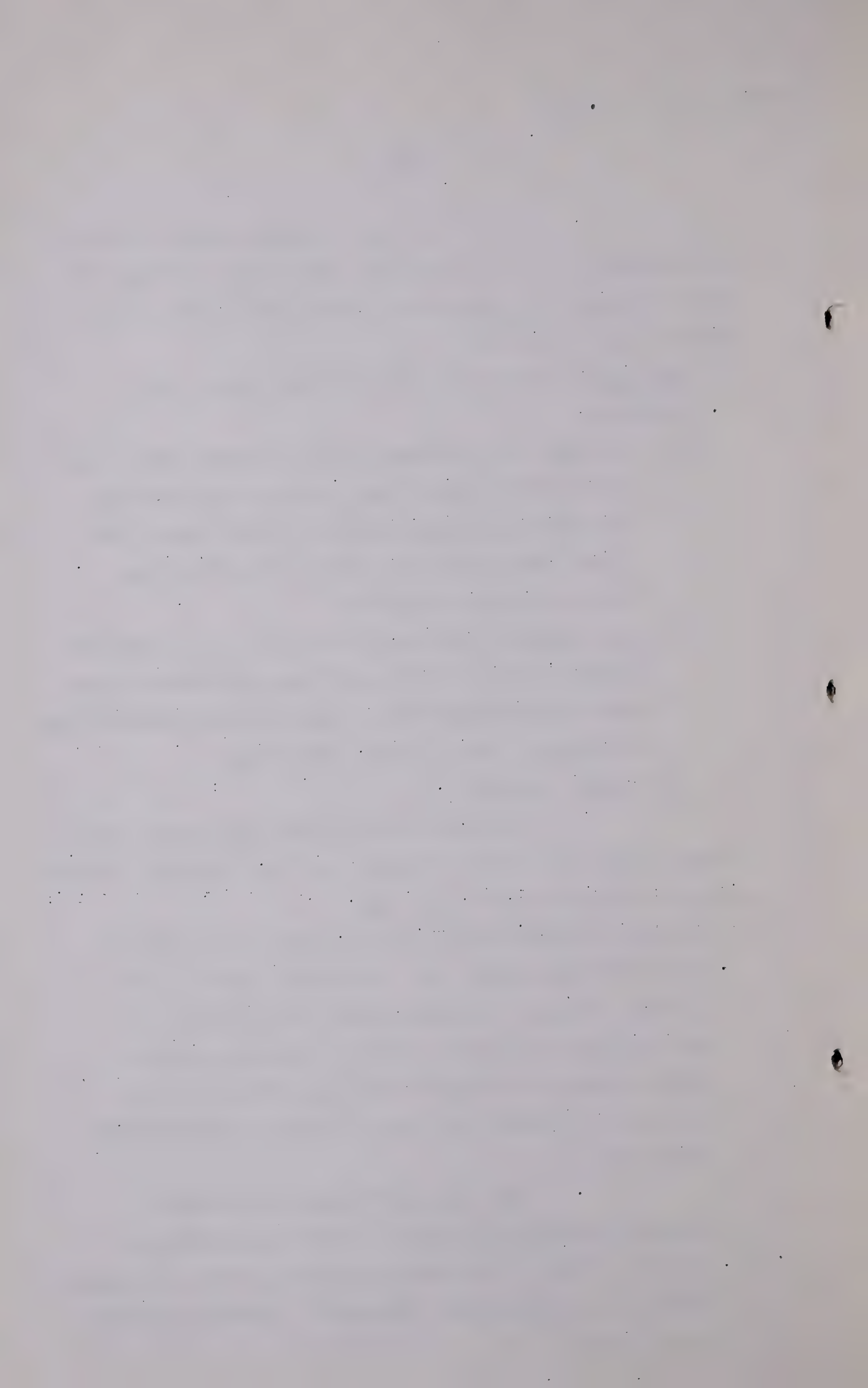
(c) Working capital.

The sum of those three, on whatever basis it may be arrived at, is, we think, or, - are items that we think should be included in the rate base.

2. The RATE OF RETURN should be on a basis of net return after deducting income tax, and having regard to the principle that the Utility Company should receive the same return as if it was investing the same amount in other securities possessing the same attractiveness, stability and certainty, equal to that of the Company's enterprise.

Then the next "Operating Expenses":

3. OPERATING EXPENSES in respect to each Operating Unit should be borne by all parties using the service in accordance with the "Demand and Volumetric" formula suggested by Mr. Zinder.



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We have, in our allocation, Mr. Chairman, given or used that formula and given it an interpretation which we think is the correct one and one which we think works extremely equitably as between all parties and one which can be used in respect to each and every operation which we tried to apply it to, so it has great benefit from the point of uniformity of application throughout to the problem, as well as we think, being by far most equitable, it makes we think the most equitable distribution.

Then the "Well Head price":

4. WELL HEAD PRICE should be fixed on a uniform basis throughout the field at a figure that will be sufficient to encourage development of future gas reserves, but having regard to the marketing situation.

And I will have a more detailed explanation of that later.

THE CHAIRMAN: I hope so.

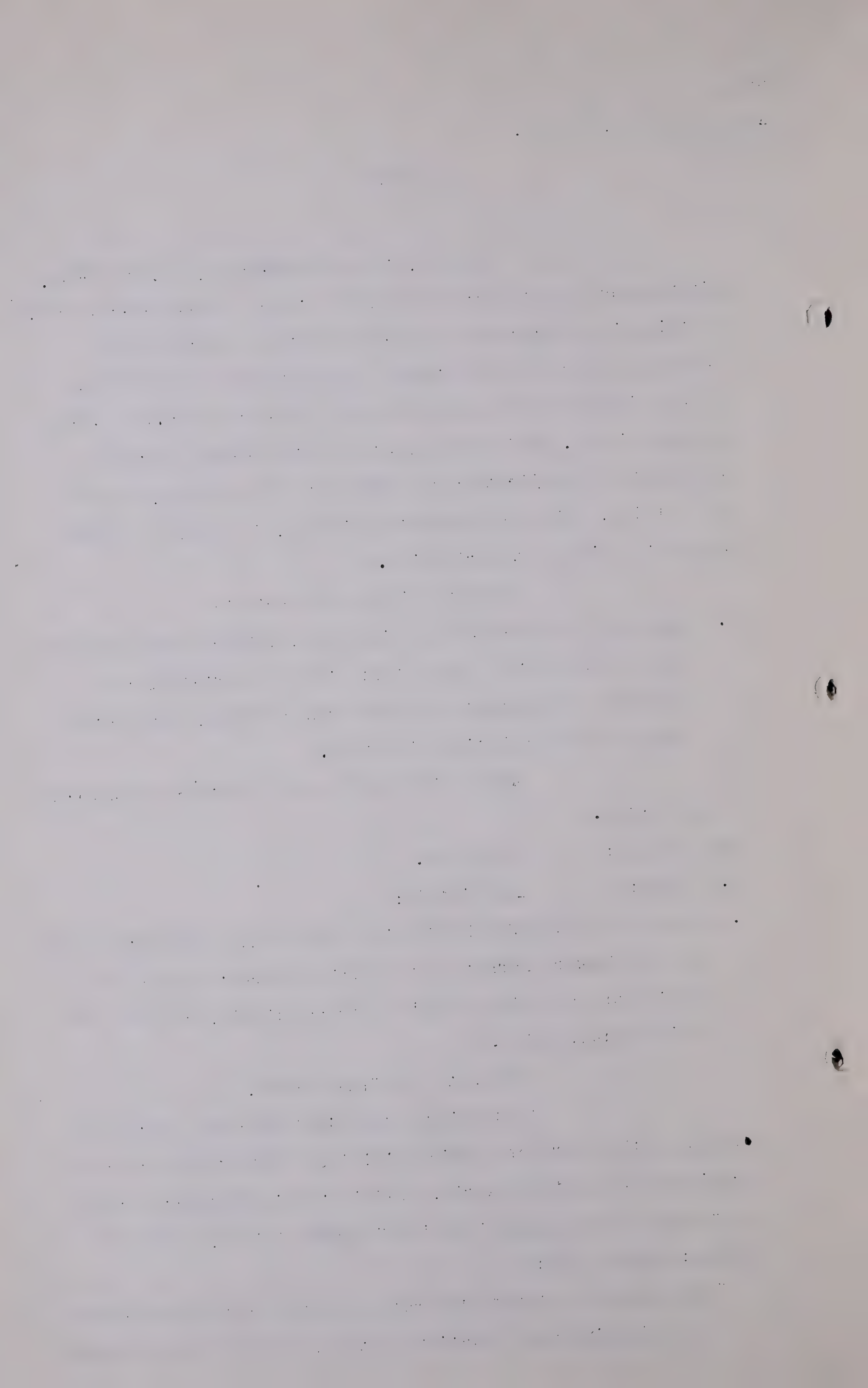
MR. HARVIE: And fifthly:

5. That all UTILITIES SERVICES in Turner Valley supplying gas for the Calgary market or the Madison market should be treated as one unit and paid for accordingly, rather than by individual units.

Now as to the "Rate Base".

In dealing with this item the principles adopted by the Board of Public Utilities Commissioners in its decision of the 14th of April, 1944 in the investigation into the rates of the Valley Pipe Line Company Limited, were as follows; and I quote:

"It should be noted that a rate base is nothing more than a compilation and valuation of the used and useful assets



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of a utility Company, or, in other words, the amount or value upon which it is entitled to earn whatever rate of return is allowed."

U.B. Judgment Valley Pipe Line Vol. 27 14 April, 1944, Page 3.

And again I quote from Page 7:

"If the Company were being brought under regulation for the first time today, all parties agree that its rate base would be arrived at by adopting some basis of valuation of its used and useful assets, less accrued depreciation, plus an allowance for working capital. Its actual invested capital might be much greater than the amount so arrived at but its "rate of return" would be computed on the "rate base" and not on its total invested capital."

THE CHAIRMAN: I did not say anything there that hurts you now did I ?

MR. HARVIE: No, but I think it is useful to look at these and find out how they are applicable to this or how they can be made applicable because after all that perhaps is the latest precedent we have to which we can refer to, for guidance.

Then I quote from pages 74 and 75:

"The construction of a rate base when a company first comes under regulation is merely a determination of the assets used and useful at that time. It is nothing more than a starting point and it is not to be inferred that such a rate base is fixed for all time or until a customer complains and has it changed, or until the utility considers that it should be increased. The rate to be earned is to be earned with relation to the value of certain

The first part of the paper discusses the importance of maintaining accurate records of all transactions. It is essential for the business to have a clear and concise record of all income and expenses. This will allow the business to track its financial performance over time and identify areas for improvement. The second part of the paper discusses the importance of maintaining accurate records of all assets and liabilities. This will allow the business to track its net worth over time and identify areas for improvement.

The third part of the paper discusses the importance of maintaining accurate records of all debts and obligations. This will allow the business to track its financial obligations over time and identify areas for improvement. The fourth part of the paper discusses the importance of maintaining accurate records of all taxes and other legal obligations. This will allow the business to track its financial obligations over time and identify areas for improvement. The fifth part of the paper discusses the importance of maintaining accurate records of all other financial information. This will allow the business to track its financial performance over time and identify areas for improvement.

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assets in determining which there are well known standards."

And again I quote, at pages 96 and 97:

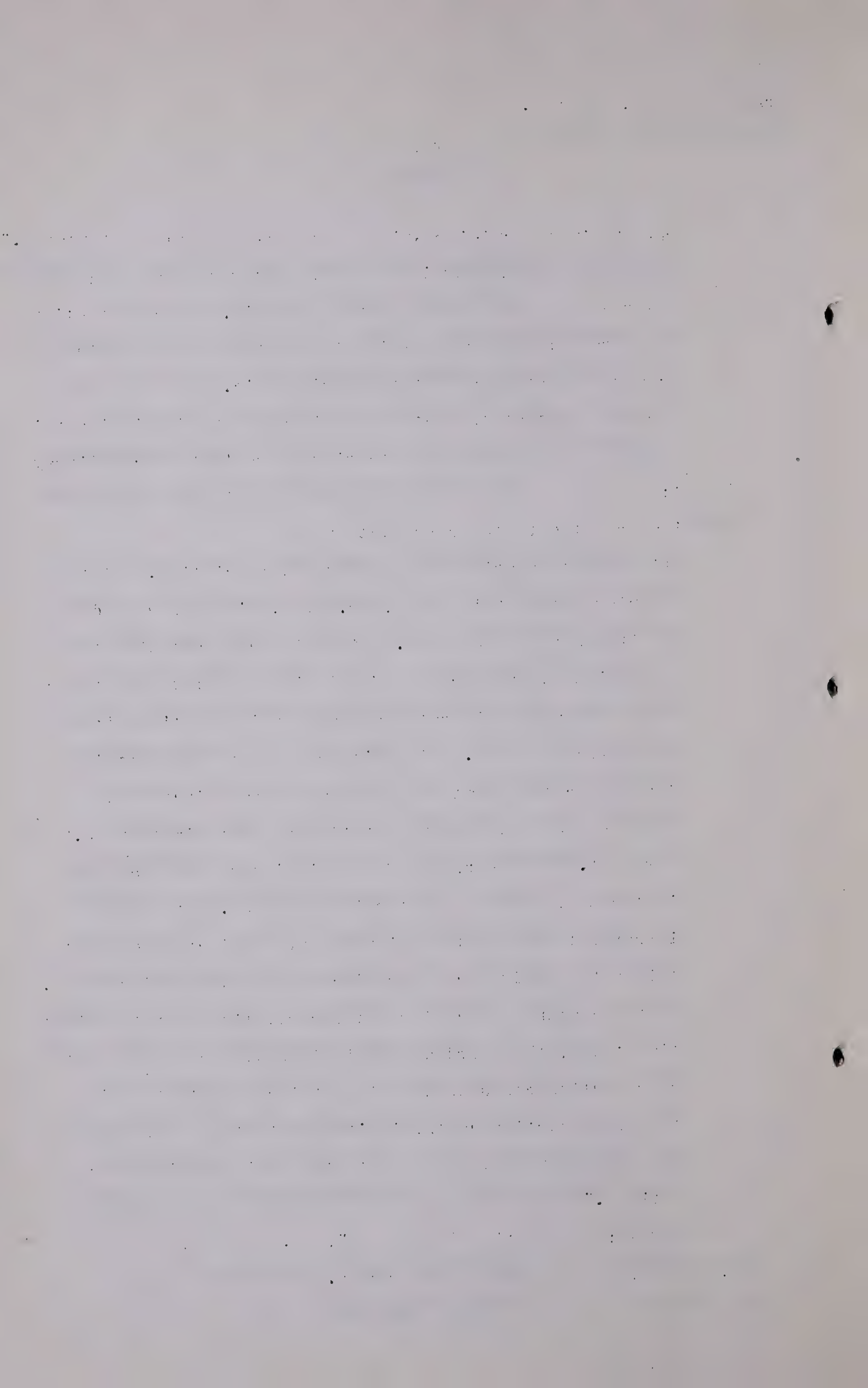
"By reason of what has already been said, the construction of a rate base for determination of the future service charge is merely a matter of arithmetic. It will be remembered that the rate base fixed by the Commissioners' and I am referring there to the McGillivray

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'was related to the reproduction cost of the plant at the time of the hearing less observed depreciation. At the hearing before this Board, Mr. E. G. Hill was called as a witness by the Company. His evidence dealt with the valuations upon which the Commissioners arrived at their rate base and their rate base and their relationship to present-day values. His evidence before the Board is that the cost of material and labour have increased between 1938 and the present time by approximately 23.2 per cent. However, the Company's investment measured in terms of money was determined in 1939. It would be improper to say that the investment has increased as at this date merely because replacement value has increased. If the company was coming under regulations for the first time today, the Board doubts if it would accept present reproduction costs as a basis but inclines to the view that reproduction costs, if it used that method, in a normal period would be the starting point of its calculations."

THE CHAIRMAN: Still "Well Head", Mr. Harvie ?

MR. HARVIE: I beg your pardon.



Argument by Mr. Harvie.

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THE CHAIRMAN: It is still "Well Head" ?

MR. HARVIE: Yes.

Now that is where we do come to our statement.

THE CHAIRMAN: All right, then if you wish to adjourn, we will do so, Mr. Harvie, until ten o'clock tomorrow morning.

(The Hearing was here adjourned to be resumed at 10 A.M.

June 13th, 1946)

Statement by Mr. Harvie

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It is still "well"?

THE CHAIRMAN:

Yes.

MR. HARVIE:

Now that is where we do come to our state.

and.

All right, then if you wish to adjourn.

THE CHAIRMAN:

we will go to Mr. Harvie, until ten o'clock tomorrow morning.

(The hearing was here adjourned to be resumed at 10 A.M.)

June 11th, 1948

Mr. Harvie

